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ABSTRACT

The nature of the changes in the patterns of financing and control of higher education systems which have been observed in the Organisation for Economic Cooperation and Development (OECD) countries over the last decade are discussed. In particular, the report analyzes the links between expenditure patterns, costs and efficiency in higher education in relation to the mechanisms by which institutions receive funds, and examines these areas against the background of changing policies for public financing. The report draws extensively on a series of country case studies prepared specifically for the analysis. The first chapter provides background information and discusses models and concepts. Additional chapters examine the following areas: (1) the existing arrangements and recent trends in the funding of higher education institutions in the studied OECD countries; (2) the variety of schemes of student financial support in the OECD member countries taking part in the study; (3) funding mechanisms and the functions of higher education institutions; and (4) future prospect and policy implications based on current observations. Contains six tables of analytical data and a resource list of national reports. (GLR)

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CURRENT PATTERNS

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
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In many OECD countries the 1980s has been a decade of rapid and quite radical changes in the patterns of financing and control of higher education systems. Key factors behind these changes are strong limitations on central public funds, increased reliance on the market, trends towards decentralisation and greater openness to community needs, and claims for greater institutional autonomy. By now many governments see financial schemes and incentives as a more effective way of steering developments in higher education institutions than direct administrative intervention.

Changes which are either under way or being discussed in several OECD countries include: increased sophistication of the formulae used in determining the allocations to institutions; more financial autonomy for the institutions once they have received their funding; bigger proportion of income from student fees; sharper distinctions between funding of research and of teaching; increased proportion of public funding to be "bid for" by the institutions; larger share of income from contracts with employers and commercial organisations. These changes are seen, in turn, as resulting in important changes in the nature of higher education itself.

This report discusses the nature of these changes, the factors behind them and their consequences, as they relate to the specific situation of several OECD countries. It draws extensively on a series of country case studies prepared specifically for this analysis undertaken under the work programme of the OECD Education Committee. The report was written by Professor Gareth Williams of the Institute of Education, University of London, in close co-operation with Dorotea Furth in the Secretariat. It is published on the responsibility of the Secretary-General of the OECD.

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Chapter 1

DIVERSITY AND DIVERSIFICATION

Background

A recent OECD study, *Universities Under Scrutiny (1987)*, drew attention to "the historical, legislative, social and administrative differences between university systems within the OECD". Higher education in most OECD countries also includes other institutions with a variety of missions and organisational and legal forms. There are near universities, such as the British polytechnics and the Australian Colleges of Advanced Education. There are also institutions with different missions that are nevertheless closely associated with conventional higher education, such as the *Instituts universitaires de technologie* (IUTs) in France, the *Fachhochschulen* in Germany, the regional colleges in Norway, and the *hoger beroeps onderwijs* councils (HBOs) in the Netherlands.

Some countries also have less formal alternatives to conventional higher education, offering professional and para-professional training in institutions such as the Special Training Schools in Japan and proprietary schools in the United States. They are funded largely by student fees, although the fees are sometimes subsidised out of public funds. Conventional institutions are beginning to compete with these newer establishments by offering similar short courses of professional and para-professional training, and also to collaborate with them by contributing to their teaching and by accrediting their qualifications.

Even the traditional functions of higher education are carried out in many different ways. First-degree courses for recent high school or secondary school leavers are often the main focus, but the aims of such courses are not the same for all subjects or for all institutions. Some emphasize general education, others concentrate on specific vocational preparation. A degree course may aim primarily to disseminate the results of research and scholarship; it may seek to develop the capacity of students themselves to undertake rigorous theoretical or empirical analyses; it may concentrate on providing a suitable atmosphere for young people to mature; or it may provide them with the skills necessary for a particular job. Many institutions of higher education also offer courses above and below degree level; they undertake basic and applied research; they engage in developmental work in which scientific and technological discoveries are turned into production processes; they sell consultancy services; they lease out their buildings and physical plant to outside users, and they perform a wide range of other public services.

There are broadly two ways in which such a diverse range of functions can be performed. One is through "comprehensive universities" or "polyversities" which undertake all types of post-school education and research. There was some development of such institutions in the early 1970s, but during the past decade there has been a growing tendency in many OECD countries to adopt the alternative pattern of a range of more specialised institutions, each with a narrower mission. Some are primarily establishments of applied science and technology, others are more concerned with humanities and liberal studies; some emphasize post-graduate education and research, others undergraduate teaching. This diversification of higher education has proceeded much further in the United States than in other OECD countries, but most are now moving perceptibly in this direction.

There is a similarly wide spectrum of funding arrangements and financial sources. A few institutions control their own sources of income and are able to teach and do research on their own terms. Others depend mainly on fees from their students but are otherwise independent of outside pressures. At the other extreme are institutions that are effectively departments of government and subject to close administrative and financial control, though in all OECD countries academics retain considerable freedom to pursue individual teaching and research in accordance with their own professional judgement.

In all OECD countries there was a massive expansion of higher education at some time during the 1960s and early 1970s, and in most this expansion had slowed down by the late 1970s and early 1980s, to be followed by renewed pressures for growth in the late 1980s. Two main policy priorities contributed to the expansion. The first was primarily egalitarian: higher education institutions provided opportunities for the rapidly growing number of young people who were completing their secondary education. The second was economic: they trained the highly-qualified workforce that was needed by the economies of the industrialised world. Both sources of growth emphasized the instructional role of higher education, and both stressed the necessity of public expenditure to fuel the expansion.

By the end of the 1970s there were growing doubts about whether expansion had met either its egalitarian or its economic aims. There was evidence in several countries that the social composition of the student body had changed little. At the same time, questions were being asked about whether higher education systems geared to the demands of students were really meeting the needs of growing economies. In most countries there was, during the late 1970s and early 1980s, a shift in public interest away from the traditional higher education towards more specific technician training and other professional and para-professional education at lower levels. As a result of such changes in political priorities and perceptions in several OECD countries, public expenditure on higher education failed to keep pace with the growth in student numbers from the middle of the 1970s up to the mid-1980s. Public expenditure per student in real terms has fallen during at least part of that period in all the countries participating in this study except Japan and Spain.

Another area of growing concern in many OECD countries during the 1980s has been the efficiency of the management of colleges and universities which many politicians believed had grown complacent and inefficient during the years of expansion. These concerns have been documented in the earlier report, *Universities under Scrutiny* (1987). The present study supplements that report by examining one of the main instruments of government influence over higher education in democratic countries, the provision of finance. It explores the increasing number of sources of finance, the changing terms and conditions on which it is made available, and the administrative structures and processes through which resources are channelled. It documents the shift away from the rapidly expanding teaching university of the 1960s and 1970s to the much wider range of more broadly-based institutions that provide many different educational and research services. As well as examining the economic background to these developments and the changes in the sources of finance and the funding mechanisms that have accompanied them, the report considers the implications of diffent models of finance for the organisational and academic behaviour of higher education institutions.

Higher education institutions have responded to changing priorities in several ways. There have been marked increases in the proportion of students in vocational subjects, in the number doing courses other than first-degree courses, and in the number of "non-traditional" students; greater efforts are being made to attract students from social groups that had not previously participated significantly – young people from disadvantaged home backgrounds and those from certain ethnic minority groups. In addition, there is a new emphasis on the research function as an activity distinct from teaching. In all the countries taking part in this study there is a growing interest in other university activities such as technology transfer and consultancy.

There have been changes in the proportions of central and local government finance, new mechanisms of central government resource allocation, increased contributions from ministries other than the Ministry of Education, and increased private sector contributions, including in some countries student fees. In nearly all OECD countries there is discussion of new and alternative funding mechanisms. The heavy dependence of most universities and colleges on public funds makes them vulnerable to changes in political priorities. Their high unit costs compared with other branches of education make them attractive targets for governments wishing to limit public expenditure. Furthermore, the fact that many of the benefits of higher education accrue to individuals at least as much as to society as a whole strengthens the case of those who advocate greater contributions by students and their families to the costs of their own higher education.

The legal and administrative autonomy of higher education institutions in some OECD countries may actually increase their vulnerability to shifts in public policy. Governments feel less responsible for autonomous institutions than for those they directly control. In the period when traditional student demand was high and governments were providing adequate resources, there was little incentive for higher education establishments to seek funds from the private sector or to undertake activities other than traditional teaching and academic research. When funds from these sources became less readily available, then higher education institutions were in a position to sell their highly-skilled services to other customers. A recent OECD study concluded that:

> "Whatever the pros and cons, the fact remains that institutions of higher education, and particularly universities, all have the potential capacity to operate as service enterprises, and under some conditions to cover a big part of their expenditure from the sale of their services" ("Educational Costs, Expenditure and Financing: An Analysis of Trends", OECD, Paris, 1986, internal document).

There are many differences between OECD Member countries, but most have adopted regulations and procedures that make it possible for their higher education institutions to sell educational and research services and to retain the income.

The debate about finance has not been concerned only with the funding of institutions. There have been equally far-reaching debates resulting in changes, and proposals for change, in the financial support for students. Here too there is in OECD countries a wide variety of practices ranging from payment of full-cost fees with no assistance at all from public funds, to free provision with all costs, including living expenses, paid for out of public funds.

The rationale for financial aid for students has been based on both equity and efficiency considerations. Without some form of financial support, lack of money would prevent many able people from undertaking and completing higher education courses. This is widely considered to be politically unacceptable on grounds of economic efficiency as well as equity. A country in which able people are prevented from studying through lack of finance is likely to have a less than optimal level of private investment in higher education. Paradoxically, however, the payment of fees and living expenses by students can *also* be justified in terms of both equity and efficiency. Many of the benefits of higher education accrue to individuals in the form of higher incomes after they have graduated. According to this view, it is unreasonable to expect taxpayers in general to pay for this private investment in human capital by students who are likely to have above-average lifetime earnings. It has also been claimed that the larger the contribution students make towards the cost of their studies, the more likely they are to be careful in their choices of courses, and the stronger is the incentive for them to make efficient use of their time while they are studying. It is also argued that higher education institutions make greater efforts to meet the needs of students if a large part of their incomes is derived from fees and they have to compete for the custom of their students. The different priorities attached to equity and efficiency, the different interpretations of each of them, and the division of student costs into tuition fees and living expenses have resulted in a very wide variety of practices.

Models and Concepts

Sociologists of higher education have identified four main forms of organisation of higher education institutions: collegial, political, bureaucratic and market (see, for example, Burton R. Clark, *The Higher Education System: Academic Organization in Cross-National Perspective.* University of California Press, 1983). The collegial model has its roots in the concept of a self-governing community of scholars arriving at consensus decisions amongst themselves. In the political model the scholars have organised themselves into different interest groups corresponding often to different subject areas; bargaining between competing groups rather than consensus amongst the whole college becomes the norm. The bureaucratic model is managed by a professional administration often heavily influenced by government agencies outside the institution. Finally, in the market model the academics within the higher education institutions exchange educational and research services for resources from the rest of the community.

There is a relationship between organisational models and the funding arrangements. There are five main ways in which higher education institutions can receive income: its own investments; general government grants and tax concessions; specific government grants; plurality of government grants; and sale of academic services. In the first the university has independent sources of income from property or investment. In the second it receives a general grant from a government agency, and within broad limits it can spend the money in accordance with its own institutional priorities. An alternative version of this form of funding occurs when higher education institutions have a favoured taxation status. If universities either pay lower taxes than other organisations on the income they earn or if they are able to recoup tax paid on gifts, this is effectively the same as the government collecting the tax and paying the money over to the institutions with no strings attached. Third, institutions can receive funding from a single government department or agency but be subject to detailed administrative regulation over the spending of these funds. Fourth, there may be several government funding agencies – different government departments and central, regional and local governments – so that the university is not financially or administratively dependent on any one of them. Finally, the institutions can act as commercial enterprises and, in effect, sell educational and research services to students, public authorities and commercial organisations.

The first two of these arrangements may be expected to be associated with "collegial" or "political" organisational forms. Effectively, the financial resources are available for distribution by the institution with few conditions attached. In these circumstances, it is likely that academic criteria will largely determine resource allocation. Whether these internal resource allocation procedures take the form of institutional consensus or competing interest groups is largely a function of the size and complexity of the institution. The third form of funding – detailed line-by-line budgeting – is likely to be associated with bureaucratic forms of institutional organisation, while the fourth and fifth are more likely to result in some form of market-oriented organisation and management styles.

In practice, of course, it is not possible to identify any of these models of organisation or funding in an undiluted form. In all OECD countries most institutions of higher education receive income from several different sources, both government agencies and private economic enterprises. None receives public funds entirely unconditionally, and no OECD country has so far depended entirely on the market for the finance of the larger part of its system of higher education. Each of the financial sources and mechanisms can operate in several different ways; and there may be differences between the planning criteria used to determine the levels of resources and the administrative rules and procedures which govern the internal use of these resources. The size of general grants can be based on arbitrary annual increments, on student-number-based formulae, on constitutional commitments, or on political bargaining. In any of these cases the university can be free to spend its resources once they have been allocated, or it can be required to have each item of expenditure authorised.

Administrative regulations can take many different forms: in some cases the institutions have to follow exactly the criteria and assumptions which were used in drawing up their budgets, and no virement between budget heads is permitted. In other cases the total budget, once agreed on the basis of accepted formulae related, for example, to student numbers, has to be spent according to other rules which govern such matters as the amount which can be spent on temporary staff, or the procedures by which equipment can be purchased. Another important distinction is between administrative procedures in which every item of expenditure has to be authorised by the funding body before it is made, and those whereby accounts have to be rendered after the event. In yet other cases external regulation may be so loose as to be almost indistinguishable from the general grant model. The market forms can have equally varied applications. The important distinguishing feature is that under the market model of funding, institutions receive payment for specific services rendered. This involves two fundamental differences from either collegial or bureacratic forms of resource allocation. It gives power to purchasers of educational services, and changes the relationship between operating units within an institution and its central administration, giving more power to the former.

There are examples of almost all possible combinations of these four models in OECD countries. The wide variety of past experience and current practice and of reporting conventions makes it difficult to generalise or to make simple comparisons between Member countries.

Finance is a means and not an end. However, a funding mechanism is not merely a device for allocating resources from providers to users. It is also a system of control and an important two-way channel of communication between the providers and users. The terms on which funds are offered show the priorities of those who supply them; the ways in which they are used reveal the preferences of those who receive them. Thus, an examination of the finance of higher education can help to interpret both the real aims and objectives that underlie political rhetoric, and the differences between the priorities of the suppliers and users of finance. Issues of equity, efficiency, quality, relevance, responsiveness and intellectual freedom may appear very different in an examination of the way institutions use their resources from what is claimed in political and academic rhetoric.

To a significant extent many OECD countries have made a transition from elite to mass higher education during the past two decades. This does not mean that the majority of their populations receive a traditional higher education, nor that inequalities in access have been eradicated. However, in most OECD countries well over a quarter of the population now receives some form of post-school education at some time in their lives, and, if all kinds of training are included, there are several countries where the figure is over 50 per cent. When participation in post-school education was confined to an elite group, the private economic benefits were considerable, and any policies which would allow these benefits to be shared by a larger number of people were self-evidently desirable. Similarly, if there is clear evidence that shortages of highly-qualified people are a serious constraint on economic growth, it is obviously appropriate to use public funds to increase the number of people with qualifications that are needed.

Higher education for an elite is essentially the social and cultural preparation of a relatively small number of people who will fill leadership positions. The common culture of national elites was maintained by such institutions as the *grandes écoles* in France, Oxford and Cambridge in the United Kingdom, the national universities in Japan, and the Ivy League universities in the United States. The abundant literature on the aims and objectives of higher education during the first 60 years of the twentieth century stressed issues such as a common cultural heritage, the moral bias of knowledge, and the social responsibilities of those who had acquired it. There tended to be relatively little differentiation between institutions or between courses. Different subjects were taught, of course, but they were to a large extent embedded within similar educational and ethical principles and common degree structures.

As higher education has expanded, the proportion of graduates entering occupations that involve political, economic and cultural leadership has declined. Technological change has enlarged considerably the range of occupations for which high-level intellectual preparation is necessary, and increased awareness of other social and cultural systems has broadened the previously ethnocentric focus of much higher education. A wider variety of courses is required to meet a greater number of cultural, social and educational objectives. Expansion means diversification of the administrative and financial arrangements as well as the subjects taught and the methods of teaching. The identification of equity and efficiency is more difficult and policies that will promote them more ambiguous.

A modern higher education system consists of a variety of different activities interacting with each other, sometimes competitively, sometimes complementarily. Each has an opportunity cost. There has to be some assessment of the anticipated benefit of each in relation to the expected costs. However, there is room for different views about whose benefits and whose costs should be taken into account.

The principal social benefit is no longer the preparation of better leaders for the benefit of the whole community. There has been a shift in emphasis away from a general liberal education towards the acquisition of the many specific skills required in a technologically advanced society. The acquisition of knowledge has become the acquisition of specific human capital; and the benefits of this capital are appropriated by the individuals concerned in the form of higher earnings, and by their employers in the form of higher output.

Such considerations point to the need for reappraisals of the balance between public and private financial support for higher education institutions and students.

A fundamental issue is whether participation in mass higher education is primarily an individual or a social benefit. When participation was confined to a small minority the question could be evaded. There were obvious benefits and the proportion of national income involved was so small that the distribution of benefits hardly appeared on the political agenda; the relatively small amounts of additional resources needed to expand opportunities seemed amply justified in terms of equity and efficiency. However, as expenditure increases the question has to be faced. The larger the number of people who obtain the benefits of higher education, the greater the relative deprivation of those who do not have it. Other claimants on public funds begin to see higher education as a voracious competitor of public resources and not merely as an insignificant fringe activity.

Demographic trends are intensifying the competition. In nearly all OECD countries the number of people in the age groups from which most students traditionally come is declining, while the number of dependent old people is increasing rapidly. There will inevitably be changes in the shares of national income devoted to each group: institutions that cater for younger age groups will receive a smaller share, while those which are concerned with the care of the elderly will have to receive more. It is becoming clear that no country can afford the provision, free of charge, of the most expensive forms of higher education to everyone who would like to participate in them. Higher education must either be provided more cheaply, or students and employers must increase their contributions in the light of the benefits that both receive.

There are no easily applied criteria to determine the total level of public expenditure on higher education, and in practice most governments have until recently used some form of incremental funding which was uncontroversial when their higher education systems were expanding. All the bargaining and political judgement was concentrated on the size and distribution of this increment. Once an activity had managed to establish itself, its future was assured. Incremental funding is the most convenient bias for the public finance of higher education institutions but it is almost impossible to implement rationally if resources are not growing. There is no reason in principle why increments should not be negative as well as positive. In practice, however, a negative increment means that some activities have to be discontinued or reduced in volume, and this is resisted by the groups whose resources are cut. A possible solution for funding bodies is to impose equal cuts on all activities but to reinstate part of the resources by allowing institutions to bid for funds for specific innovations. Various versions of this arrangement have been adopted in several countries during the past ten years.

Claims by some economists that cost-benefit analysis based on rate of return calculations provides valid answers to such questions have usually been treated with scepticism by policy-makers. Decisions about the total number of students and the quality of provision to which they should be entitled have remained largely a matter of policy judgement.

OECD countries have made a variety of policy judgements. Some have attempted to maintain high levels of expenditure per student but have restricted entry, allowing only a proportion of qualified secondary school-leavers to continue their studies. Several have established two or more tiers of higher education and made it easier for students to enter the less expensive sectors. Some have established *numerus clausus* in the more expensive subjects such as medicine and engineering where there is a fairly clear economic demand for graduates, but allowed unrestricted entry to the less expensive literary and social science courses. Others require students or their families to contribute to the costs of their higher education through the payment of fees. Most make some distinction between the tuition costs of higher education institutions and the living costs of students while they are studying. With the expansion of non-traditional forms of higher education and of continuing education, many countries are taking the view that the acquisition of initial formal qualifications should be treated as a social benefit and at least the tuition costs paid for collectively, but that any additional education or training should be considered a private benefit and paid for by individual students or their employers.

In some countries higher education institutions are in effect government agencies similar in principle to such services as law enforcement, national defense or diplomacy. They are political activities, and the priorities of the government in power are implemented by supporting bureaucracies. Resource allocation choices are the result of explicitly political decisions.

Another approach is formula funding. It may be difficult to agree to a suitable set of formulae initially, but once it has been done resources can be allocated more or less automatically, depending on the number and type of students and any other criteria considered important when the formulae are established. One difficulty is that governments invariably reserve the right to alter the formulae if their priorities change. Another is that institutions receiving funds manipulate their performance indicators to take advantage of the weights of the various coefficients in the formulae.

Resource allocation issues entail more than narrow economic considerations. The responsibility for deciding what is taught and what research is done in higher education institutions is a political question.

There has for centuries been debate about the proper relationship between universities and the religious and secular authorities. One view is that the State, embodied in the government in power, has the right and the responsibility to ensure that the activities of universities and colleges are in the best interests of society as a whole and of future generations. The opposing view is that in pluralist, democratic societies governments have neither a legitimate claim nor the capacity to regulate intellectual and cultural life on behalf of society in general. Only decentralised decision-making in all aspects of academic and scientific activity can safeguard the various interests and groups in the community against the excesses of a government in power.

There are further problems when finance comes from public funds. In democratic societies governments are trustees for the taxes paid by their electors. Teaching and research use resources. In most OECD Member countries governments supply much of the finance and they have, therefore, a responsibility to see that it is employed in a way that accords with the best interests of their electors. They can delegate some of their regulatory powers to the institutions or to intermediary agencies, and they usually do this because few politicians claim to have the specialist knowledge necessary to take informed decisions on highly technical matters. Nor are they able to ensure that the resources are used efficiently without the assistance of administrators and professional academics, both of whom have independent claims to authority resulting from their expertise. Governments cannot, however, abdicate their ultimate accountability to those who put them in power, and therefore they have a clear right to demand some accountability from users of public funds. This must inevitably constrain the independence and intellectual freedom of academics.

There are broadly two ways in which intellectual freedom can be protected in higher education systems which are dependent on public funds. It can be guaranteed by constitutional or statutory provisions which make it difficult for any particular government to abuse its powers and responsibilities, or it can be safeguarded through the legal and administrative autonomy of the institutions. The former approach has been adopted in several European countries. Established university staff are employed directly by the State, and their jobs and their salaries are guaranteed. In other countries, of which the United States is the best example, academic freedom is secured by the financial autonomy of institutions which receive their funding from a variety of government agencies and other sources.

Advocates of financial autonomy by higher education institutions claim also that it encourages financial responsibility by resource users and, hence, better value for money. The basis of their case is that if a spending body knows it has a finite amount of resources, the opportunity cost of the resources will be clear to those who take the spending decisions; whereas if resources for specific purposes are obtained from an outside agency, it is not usually obvious what is being sacrificed when finance is used for one purpose rather than another. This raises questions about the optimal size of the autonomous financial unit or "cost centre". Just as a university may claim that it can use funds more effectively than a far-away government ministry, so a specialist subject department may claim that it can use them more efficiently than a remote university administration; indeed, individual members of staff may believe that they can take better financial decisions about their own teaching and research than a head of department who is unlikely to have detailed technical knowledge about the activities of all the high-level specialists in the department. A major issue in determining the funding arrangements for higher education is how much financial responsibility is appropriate at each level of management. Three main principles are involved: the decision about whose preferences should have priority; the nature of the social and technological organisation of the teaching or research; and the managerial competence of the people taking the decisions.

The next two chapters review the situation in OECD countries in the light of these themes, and Chapters 4 and 5 attempt to draw some analytical and policy conclusions.

Chapter 2

INSTITUTIONAL FUNDING

Expenditure Trends 1970 to 1988

All the countries taking part in this study reported some financial stringency in their public funding of higher education during at least part of the period between the early 1970s and the mid-1980s. However, the details vary considerably between countries. The information provided in the country case studies makes it possible to devise three main indicators of the trends in financial circumstances of higher education institutions for this period: *i)* percentage of national income devoted to higher education; *ii)* annual rates of growth of recurrent expenditure on higher education at constant prices; *iii)* current expenditure per student at constant prices. These indicators are shown in Tables 1, 2 and 3 of the Statistical Annex.

In general, the financial position of higher education has improved somewhat during the late 1980s, but only the authors of the Finnish and French reports are able to foresee any significant improvements in financial prospects during the early 1990s. Several fear that the shortage of resources will be exacerbated by the reduced numbers of school-leavers as a result of the fall in the birth rate during the late 1960s and 1970s.

The countries where the overall financial situation of higher education has improved most during the 1980s are Greece, Spain and the United States. In Spain, expenditure per student has increased every year since the early 1970s, both in constant pesetas and as a percentage of GNP. In the United States: "During the period 1969-70 through 1984-85, there was considerable growth in institutional revenues and expenditures. In constant 1980 dollars revenues increased from $48.3 billion in 1969-70 to $74.2 billion in 1984-85. During the same period, full-time equivalent (FTE) student enrolment rose from 6.3 million to 8.9 million. FTE expenditures, measured in constant dollars, rose from $7 526 per annum in 1969-70 to $8 065 in 1984-85, thus running counter to the experience of many OECD nations." (Unless otherwise stated, all the quotations in this volume are taken from the national reports.)

However, this figure for the whole period conceals a slight decline in per-student expenditure during the 1970s, and an increase in the 1980s, which was largely due to the big rise in private sources of income which rose from $2.2 billion in 1980-81 to $3.1 billion in 1984-85 at constant prices.

In Greece the proportion of GNP devoted to higher education institutions rose from 0.54 per cent in 1974 to 0.83 per cent in 1988. Expenditure per student in the universities increased throughout the two decades but at a much slower rate in the 1980s than in the 1970s. On the other hand, in non-university institutions, expenditure per student in real terms fell throughout the whole period. The net result was that during the 1970s, expenditure per student increased by 3 per cent per year during the 1970s but declined by 0.7 per cent per year during the 1980s.

In Japan also, expenditure per student at constant prices has risen continuously since the early 1970s, but this includes private expenditure. The total *government* expenditure on higher education increased over the 1970s from 0.39 per cent to 0.56 per cent of the GNP. By the end of the 1970s the slowed economic growth coupled with the mounting welfare expenditures forced the government to severely restrain the budget. After the reversal in trend the total government expenditure on higher education relative to the GNP diminished to 0.45 per cent by 1985.

Countries in which higher education expenditure as a percentage of national income fell between the early 1970s and the mid-1980s include Australia, Finland, France and Norway. In Norway "in real terms, expenditures by higher education institutions have increased somewhat from 1975 to 1987. However, as a percentage of GNP, the institutional expenditures have declined somewhat partly as a result of an increase in the GNP caused by oil income, but probably also to some extent because of a somewhat lower political priority for higher education." The percentage of national product devoted to higher education fell from 1.08 per cent in 1975 to 1.04 per cent in 1987, but it has been rising in recent years. In France, total public expenditure on higher education as a percentage of gross domestic product declined marginally from 0.68 per cent in 1975 to 0.67 per cent in 1984. The decline in expenditure per student of the ministry responsible for higher education was also very slight, from FF 8 296 in 1975 to FF 8 219 in 1988 at constant 1974 prices. In Finland the proportion rose sharply in the early 1970s and in proportion to gross national product, higher education expenditure was highest in 1976, 0.75 per cent, whereas the corresponding figure in 1987 was 0.68 per cent. Provisional figures show that it rose again to 0.71 per cent in 1988. In Australia, Commonwealth Recurrent Grants for higher education fell from 1.05 per cent of GDP in 1975 to about 0.9 per cent in 1987.

Another important indication of the financial position of higher education is expenditure per student. According to this indicator, countries where higher education has apparently had the least favourable treatment in recent years are Denmark, Germany, the Netherlands and the United Kingdom.

In Denmark, expenditure per student at 1985 prices was DKr 52 235 in 1973, DKr 53 177 in 1980 and DKr 40 068 in 1985; total expenditure on higher education at constant prices rose from DKr 3 523 million in 1975 to DKr 4 156 in 1980, and then fell back to DKr 3 912 million in 1985.

In Germany, for reasons already stated, it is difficult to give a single indicator of the financial position of higher education institutions. However, recurrent funds per student for non-staff costs fell from DM 1 966 in 1975 to DM 1 464 in 1986. Total public expenditure on higher education fell by 1 per cent between 1980 and 1984; since then it has risen slightly, but in 1986 it was still below the 1980 levels in real terms. During the same period the student/staff ratio in universities deteriorated from 29:1 to 34:1. The proportion of GNP devoted to higher education institutions in total increased, however, from 1.02 per cent in 1970 to 1.18 per cent in 1986.

In the Netherlands, public expenditure on higher education fell from Gld 5.9 billion in 1975 to Gld 4.9 billion in 1985 at constant 1980 prices. Between 1975 and 1983, expenditure per student fell by 30 per cent in universities and by 15 per cent in higher professional education.

In the United Kingdom, central government recurrent expenditure on higher education (including grants to students) fell from 1.13 per cent of GDP in 1981-82 to 0.94 per cent in

1985-86. Government recurrent grants to universities at 1980 prices remained at about £980 million throughout the 1970s and fell slightly to about £960 million in 1986-87. However, in the polytechnics, recurrent government grants increased from about £360 million in 1982-83 to £375 million in 1986-87. In terms of expenditure per student, however, the position is reversed. The universities preferred to reduce student numbers rather than to allow what they called the "unit of resource" to fall further, which they claimed would have damaged irrevocably the traditional high quality of British university education. At constant prices, government recurrent grants per student fell from £4 118 in 1970-71 to £3 186 in 1980-81 (largely because of the high rates of inflation in the 1970s) but then remained fairly constant till 1986-87, when the figure was £3 072. The situation in the public sector was different, and total recurrent expenditure per student (most of which comes from public funds), fell from £3 041 in 1982-83 to £2 655 in 1986-87.

These extracts from national reports and the associated tables indicate that from the mid-1970s to the mid-1980s the financial situation of higher education deteriorated in many OECD countries. It is impossible, however, to make direct comparisons of costs and expenditures between countries. Apart from the normal problems of international comparisons of economic indicators resulting from fluctuating exchange rates, the ways in which higher education is defined and financed differ widely between countries, and the coverage of the figures varies.

Core Finance

Types of Private and Public Institution

In all the participating countries except Japan, where exactly half of total institutional income in 1985 came from private contributions, the main source of funding for higher education is the public sector. In Germany, the United States and Canada this means principally the individual *Länder*, states or provinces, while elsewhere national governments are the dominant source of funds. It is important, however, to distinguish between public finance of education and public control of institutions. Institutions that are legally and administratively independent of public control can receive public funds, and those which are under public control may in most countries receive income from private sources. This report is primarily concerned with the finance of institutions, and most references to private funds are concerned with the source of funding and not the institutions which spend them. The next few paragraphs, however, consider the distinction between public and private control of institutions.

The distinction between public and private control is often not a sharp one and there are many intermediate positions. In the private sector, post-secondary institutions range from commercial profit-making establishments to those which are public corporations little different from institutions controlled by public authorities. Within the public sector, a distinction is often made between universities which usually have a great degree of independence and other institutions which have less. Sometimes both groups are further subdivided, for example into categories such as "comprehensive" universities, "technological" universities, "liberal arts" universities and so on. There is an ever greater variety of non-university institutions. The United States report comments that rational analysis of higher education finance in that country is made complex by the fact that direct and indirect funding comes from so many different sources. This is true to an even greater extent of higher education in the OECD as a whole.

In the United States there are broadly two models of higher education funding: one for state-supported or "public" colleges and universities, and the other for private or "independent" colleges and universities. In 1984-85, 6.7 million out of a total enrolment of 9 million students were in the "public sector", i.e. almost exactly 75 per cent. However, the private institutions had 35 per cent of total expenditure, giving an average recurrent expenditure per full-time equivalent student of $11 200, compared with $7 001 in public universities. The pattern of income of the two sectors is markedly different: 39 per cent of the income of private universities in 1984-85 came from student tuition fees, compared with 15 per cent in the public institutions. Conversely, over 45 per cent of the income of the public universities came from state governments, compared with less than 2 per cent in the private sector. Another major difference is in endowment income and private gifts: 9 per cent of private sector income, compared with only 3 per cent in the public sector, came from this source. The remaining sources of income are broadly similar for the two sectors: sales of services provide 20 per cent in the public institutions, compared with 24 per cent in private. The federal government provides a larger proportion of the income of the private institutions than the public: 16 per cent as opposed to 11 per cent. It must also be remembered that these figures refer to direct payments to institutions: a high proportion of student fees is subsidised through federal and state loan and grant schemes.

The proportions of some of the items have changed significantly since 1970. In particular there has been a big increase in income from sales of services and, in both sectors, a decline in the proportion of income from the federal government. This last is somewhat misleading in that there has been a shift towards subsidisation of the fees and living costs of individual students rather than a real reduction in the total federal share of higher education funding.

In the United States many of the private universities are high-prestige, high-quality and high-cost institutions. This is not the case in Japan, the other OECD country with a substantial private sector. Like the United States, Japan has a great variety of higher education institutions. From the standpoint of control, or the subject of establishment and financial support, Japanese institutions of higher education are divided into three categories:

i) national (public) institutions;
ii) municipal (local public) institutions;
iii) private institutions.

In each sector there are four-year universities and colleges and two-year junior colleges, as well as a small number of specialist institutions of various kinds. About two-thirds of the post-graduate students are in national universities; otherwise, private institutions predominate in all categories of higher education, accounting for 78 per cent of total enrolment. This percentage has remained more or less constant during the past 20 years.

The funding differences between the public and private institutions are greater than in the United States. In 1987, 63 per cent of the income of national universities came from the government and 9 per cent from tuition fees. Of the remainder, most was income from hospitals attached to universities. In the private sector, 63 per cent came in the form of tuition fees and 14 per cent from the "current cost subsidy" of the central government. Neither public nor private institutions yet obtain any significant income from the sale of educational or research services, but the government has recently made legal changes to permit, and indeed to encourage, national universities to increase their income from such sources. The other major contrast with the United States is in expenditure per student, which in Japan is much higher in the public universities than in the private – $10 258 compared with $5 212 in 1985. This disparity is very largely a result of the differences in the mix of subjects taught in the two sectors. The national institutions have a high proportion of their students in natural sciences, engineering and education; the private institutions tend to have large proportions of their students in the humanities, social sciences and home economics. Private institutions tend to concentrate, therefore, on fields where per-student costs are relatively low.

One of the fastest growing segments of Japanese higher education are the special training schools. In most cases these institutions were originally proprietary (private) schools offering various kinds of training, but after amendment of the School Education Law in 1976 they received charters from the Ministry of Education.

The Netherlands has some special features in this context resulting largely from the religious origins of higher education in that country.

> "[There is] a sharp distinction between government-funded higher education institutions and externally-funded ones (which account for less than 10 per cent of the total number of students). Government-funded institutions may be public or private (founded on a denominational basis). In order to obtain government funds private institutions must accept the same legal conditions as public institutions. Undergraduate courses are funded in full as are certain post-graduate courses such as medicine and other research-based courses. Some other post-graduate courses are subsidised for a limited period only. Externally funded institutions normally receive no grant from the state and are not subject to rules on the fees they may charge."

These general regulations of fees guarantee access to higher education but restrict financial stimuli for differentiation in quality. The policy aims to secure an overall high level of quality. In the Netherlands, there has also been a sharp distinction between university research and education, and higher professional education. However, after recent legal changes concerning higher professional education, the level of autonomy of both kinds of institutions is more or less the same.

Another country where the private sector is of some significance is Norway where about 10 per cent of the full-time equivalent students in higher education are in private institutions. However, the percentage of the total number of students is somewhat higher, as there is a larger percentage of part-time students in private institutions. Portugal is another country in which the private sector is growing. In 1986-87, 19 per cent of all students were in institutions outside public control, about a third of them in the Catholic University of Portugal. However, as in Japan and in contrast to the United States, "the private institutions are oriented only to the social sciences and letters areas: management, economy, history, law, sociology and languages", i.e. the less expensive subjects.

No other OECD country has a substantial private sector, though in some countries private institutions are beginning to develop under the pressure of financial stringency in publicly funded higher education. Two contradictory trends can be identified. In some countries, especially those of Scandinavia and to a lesser extent Japan and the United States, there have been moves to increase the public finance available to private institutions, and in several countries – for example Finland, the Netherlands and the United Kingdom – such trends in the past have effectively resulted in their absorption into the public sector. The opposite trend, much more recent in most countries, is for private institutions to develop in response to market opportunities and perceived gaps in public sector provision. This trend towards private institutions which, it must be repeated, form a small proportion of the total except in Japan and the United States, seems likely to increase in importance in the future as public institutions come to depend more on private funds; and in several countries, the public funding bodies make funds available to private institutions through a variety of routes.

In Denmark "universities and other post-secondary institutions are the direct responsibility of the State, which provides almost total funding." In Finland "all the institutions of higher education are financed by the State and are subordinate to the Ministry of Education. The State assumed financing responsibility for the last of the private institutions in 1974-81." In France only 1.8 per cent of university enrolments are in private institutions, nearly all of them Catholic. In Germany "institutions funded by private sources are an exception and of no quantitative importance". In Spain "the university system is basically a public one. Private universities and colleges, whose existence is recognised in the Constitution, serve only a small number of students". In Greece "the existing system of financing depends almost entirely on the general public budget... The 1975 Constitution provided for free admission to all levels of education and banned the operation of private university-type institutions". In the view of some Greek observers, this prohibition of tuition fees and private universities is beginning to hinder the development of higher education. Furthermore, it is rather hypocritical in that 20 per cent of all Greek students are in universities abroad because they are unable to find places at home, and they receive virtually no financial support from public funds.

In Australia also there was considerable convergence between the universities and colleges of advanced education in the years preceding the introduction of the Unified National System in 1989. Two of the larger colleges were redesignated as universities with little more than an administrative decision.

The distinction between the two former sectors has now been removed, particularly for funding purposes, as they rely very largely on federal government funds. However, a small number of private higher education institutions have been established in recent years.

Apart from the public-private institution distinction, most countries have two or more distinctly different categories of public higher education establishment. In nearly all cases the universities constitute the dominant and more prestigious sector with a considerable degree of academic and often financial autonomy. There are exceptions, for example in France, where several of the *grandes écoles* have very high prestige. The non-university institutions are usually less generously funded, although several countries report that the gap has been closing in recent years, frequently as a result of deliberate government policies.

In Great Britain the universities are independent corporations, and the polytechnics acquired a similar status in April 1989 following the passage through Parliament of the Education Reform Act. All public institutions of higher education will be autonomous legal entities governed by their councils or governing bodies, and thus technically private. However, they will remain under considerable public influence, particularly through the conditions attached to their funding. There is one small privately financed university with chartered status similar to the public universities and, in addition, there are a small number of university colleges affiliated to and accredited by American universities.

The universities, despite the financial stringency of the previous decade and the increasingly prescriptive guidelines of the University Grants Committee (UGC), have retained very considerable independence in the internal allocation of their recurrent income and are permitted almost unlimited virement between budget heads. Average income per student in 1985-86 was £5 428, compared with £4 662 in the polytechnics, the most favoured of the public sector institutions. In the public sector the polytechnics and colleges were, until 1989, funded by formulae, and only limited virement between budget heads was possible. Major institutions outside the universities now have more than half the total number of students, and the 1988 Education Reform Act has given them institutional independence similar to that of the universities. In many countries, British polytechnics would probably be classified as universities. However, the funding gap remains large and, in contrast to most other countries in terms of expenditure per student, it has widened during the 1980s.

In the United States the public sector includes: state universities which have a full range of academic activities, including substantial research and doctorate programmes; state colleges which have four-year undergraduate programmes only; and two-year community colleges. The structure is thus similar to that in Japan. There is, however, the important difference that in the United States they constitute an integrated system in which students can transfer between the different institutions, whereas in Japan such transfer is very rare. Funding mechanisms are similar in all three categories of institution, with student-number-based formulae being the main criteria for institutional financial support. Once the formula allocation has been made, institutions have considerable freedom in how they spend their income. Federal financial support for private institutions largely takes the form of tuition fee support for students and research contracts.

Funding Mechanisms

In several OECD countries, of which the most obvious are Australia, the Netherlands, the United Kingdom and the United States, higher education institutions are effectively autonomous economic enterprises. They may receive a substantial part of their income from public funds in a variety of ways, but they do have considerable discretion over the way they use funds once they have been obtained. Within the institutions, financial authority is usually held by a council or board of trustees. The main characteristic of such governing bodies is that the majority of members do not earn their living from working in the institution, and the board or council is supposed to reflect the views of informed lay opinion in the community as a whole.

In Australia the autonomous institutions are funded on a rolling triennium basis, and operating grants are allocated as a single block grant by the federal government. From 1989, institutions will be increasingly funded according to their mix of activities. Education profiles have been introduced to allow each institution to develop in the way which best fits its particular mission and objectives. Institutions will negotiate with the federal government to reach an agreed profile as a basis for determining the resources needed to achieve their aims. In addition, the universities and colleges are able to earn income from other sources for research and consultancy activities.

The Netherlands system of funding also consists essentially of formula-based block grants being paid to universities and other autonomous institutions. However, an important feature is that funding is not based simply on enrolment. Instead, the staffing and resources formulae provide strong incentives for a rapid selection of potential dropouts and the stimulation of rapid graduation. For every dropout and every graduate the institution receives a formula-based amount of money that is independent of the real studying time of the students. Because of these incentives it can be expected that the considerable freedom of spending enjoyed by the institutions improves institutional management, administration and financing. There are also grants for specific purposes. Excluding investments these grants amount to 6 per cent of the total allocation.

In Great Britain the universities received a block grant from the UGC amounting in 1987-88 to about 55 per cent of their total income on average. In principle, the universities are free to spend this recurrent grant as they wish, but they have been subject to increasing surveillance in recent years. The non-university institutions have, until 1989, also received what is in effect a block grant from the government on the advice of the National Advisory Body. The size of the grant is determined largely by formulae based on student numbers but, like the universities, the institutions are not in principle compelled to follow the formulae when making their own internal resource allocation decisions. Universities have always been able to supplement their core funding from other sources, and legal changes in recent years now permit public sector institutions to do so also. From 1989 onwards there will be major changes in the core funding of higher education institutions. Two new bodies have been established – the Polytechnics and Colleges Funding Council (PCFC) and the Universities Funding Council (UFC). The precise arrangements remain to be worked out, but it is the government's intention that the institutions should be accountable in much more detail for the uses to which they put public funds, and that at least a part of their core funds should be bid for in terms of both price and quality.

The United States is the closest of all OECD countries to a market model of funding. Most institutions receive substantial funds from federal government, state government and non-government sources, and most of these funds are for particular purposes. Excluding fee income, only about 10 per cent of the income of higher education institutions in the United States is deemed to be unrestricted, although in practice the figure is higher because overhead charges on many research contracts and similar activities are in effect unrestricted income. However, in general, higher education institutions in the United States are clearly subject to a high degree of market accountability.

In Japan there is a sharp contrast between the national universities and the private institutions. National universities are largely funded through the National Schools Special Account (NSSA) which is in effect an administrative agency responsible for the financial administration of the universities. Special accounts in Japanese law are able to retain income they earn from user charges, but any such income belongs to the account as a whole, so there is little incentive for individual institutions to make efforts to raise additional income.

> "A special account of any kind remains in principle as a subdivision of the national budget, and has to be approved every year by the Diet and executed by the government. The NSSA is no exception; its budgeting and disbursement is governed by the Ministry of Finance and the Ministry of Education, Science and Culture."

The management of Japanese public universities is subject to two opposing pressures. It is a long-established principle that the ultimate authority in academic decision-making rests with the academic department. However, in order to secure necessary financial and administrative resources for the rapid expansion of universities in the post-war period, all the national institutions were integrated equally under the Ministry of Education almost as extensions of its administrative organisation. Thus, while departments commanded ultimate authority in decision-making, the Ministry of Education maintained strong links with respect to administration and finance. The contradiction between the two elements still characterises the governance and finance of national institutions at the present time.

More than two-thirds of the income of the private higher education institutions in Japan come from fees and other student charges. However, since 1970 they have received a "current costs subsidy" administered by the Japan Private Promotion Foundation. They receive a formula-based grant linked largely to student enrolment and an estimate of what their cost per student ought to be. The government then establishes a "table of coefficients" that represents the proportion of the current costs to be subsidised for different categories of student, or according to other criteria that the government considers to be important. This "functions as an incentive system to encourage changes desired by the Ministry of Education". However, once the private universities have received their grants, they are allowed within very broad limits to spend the money as they wish. Since the current costs subsidy was established there have been persistent criticisms that a substantial part of the augmented financial resources were devoted not only to improving educational conditions, but also to raising the wage levels of faculty and administrative staffs. The authors of the Japanese report comment cautiously that the past behaviours of the private institutions do appear to indicate that they have not only been determined by considerations of educational environment, but also strongly influenced by the interest of their members and other organisational factors.

Public higher education in other countries taking part in this study, and in most other OECD countries as well, is much closer to what has been described in Chapter 1 as the bureaucratic model of resource allocation. In many continental European countries there has traditionally been considerable government intervention in the financial administration of individual higher education institutions, including universities. In most, the trends during the past two decades have been away from such intervention.

However, in Denmark there was an increase in government involvement in the detailed financial management of universities during the 1970s. This followed the creation of a central planning body, the Directorate for Further and Higher Education, which prepared a General Plan that introduced many of the instruments which are used in the administration of the higher education system today. The main aims of the General Plan were to orientate the higher education system more explicitly to the needs of the labour market and to improve productivity and efficiency. The plan provided for some measure of external control over the size and distribution of the annual intake of students, the methods of resource allocation within institutions, and the pattern and structure of courses. Of these the most important for the present study is the resource allocation or budget model.

> "The main principle is that the budgets are being split up into activity areas of the institutions as opposed to the previous practice whereby the institutions received a global amount to be administered by themselves autonomously. By using a very finely-meshed division into activity areas, the central budget agency will obtain considerable influence over the development of individual institutions. ...it has become possible for the central authorities to arrive at significant resource-related priority decisions among the subject areas of the institutions."

An interesting feature of the model is that resources are linked not to the number of students but to the number of students completing courses.

This is in part an attempt to deal with a problem that Danish universities share with those of Germany and the Netherlands: the very long periods of study before students graduate. The most interesting feature of the new arrangements is that it will make a serious attempt to combat the problem of excessive lengths of study, while at the same time allowing students considerable flexibility in the way they undertake their studies. The key to the system is the idea of a "clip card". Each eligible student will be able to obtain a card divided into 48 monthly clips, and for each month of study undertaken one clip will be used up. If a student wishes to take a break before continuing, he or she will be able to retain any unused portion of the card for later use. Beyond the basic four years, students will be able to apply for an advanced card, but the clipping on this is designed in such a way as to provide an incentive to students to complete their studies quickly.

This movement away from financially autonomous higher education institutions towards financial regulation from the outside contrasts with developments in many other European countries. There has been considerable opposition from the institutions. One criticism is that the Ministry of Education lacks the professional expertise and legitimacy necessary for it to be able to exercise its powers efficiently. On the other hand, supporters of the new arrangements argue that "it cannot be expected that the agents who do possess the professional expertise and legitimacy, i.e. the individual educational institutions, are willing to – or able to – consider the general interest rather than their own interests". Recently, the Danish government introduced new planning instruments designed to provide incentives, rather than coercive administrative instruments, for allocating resources within higher education institutions. These are considered in the context of the discussion of moves towards market forms of resource allocation in the next section.

Finland is another Scandinavian country in which "the bulk of university funds come through the state budget, in which they are earmarked in relatively great detail for various purposes". However, in Finland there has been movement in the opposite direction to that in Denmark. "The current trend [is] of delegating more decision-making powers to the institutions. Within the institutions the present trend is also towards delegating powers to faculties and departments. These trends make greater demands on university management". However, the fact that change in administrative autonomy is a relative concept is revealed by the comment in the Finnish report that "as regards posts, only professorships and associate professorships will be defined in the budget, other appointments being determined by the institutions themselves." In many OECD countries the idea of any government intervention in the appointment even of the most senior academic staff would be considered an unacceptable interference in academic freedom. However, the Finnish government is clearly a benevolent taskmaster. Finland is one of the very few countries where further growth is confidently expected in government funding of higher education in the foreseeable future. The Higher Education Development Act, passed in 1986, secures a growth in funds corresponding to the rise in costs up to 1996, and the government also intends to increase some capital funds by a minimum of 15 per cent by 1991.

The third Scandinavian country taking part in the study – Norway – like Finland shows a "general trend ... towards more discretion for the institutions in their internal resource allocation", but from a relatively interventionist position. Under present arrangements:

> "Budgets approved by the Ministry are subdivided into salaries, other current expenditures, investments and transfers. Within certain limits, institutional trade-offs between salaries and running costs are allowed. The number of permanent positions is, however, decided by the Government, which also appoints higher level scientific personnel."

However, the allocations to individual institutions are based on proposals from the institutions, normally accompanied by institutional development plans. In the case of regional colleges, the institutional proposals are accompanied by recommendations from the relevant board of regional colleges. Apart from this extra tier of administration there is no significant difference in the basic principles of funding between universities and other higher education institutions. Institutional proposals for internal resource allocation are usually accepted by the Ministry but the establishment of more extensive new courses has to be agreed by central authorities.

In May 1989 a new law on universities was passed by the Norwegian Parliament. It will come into effect in 1990 and will enable the universities to appoint all staff, including full-time professors and top administrators. In addition, the institutions will obtain increased autonomy in the use of budget allocations appropriated for running costs. Major investment projects will still have to be approved by the government.

In Germany, higher education institutions "have no budgetary sovereignty" and the financial arrangements correspond more or less to the bureaucratic model. "The general regulations applying to budget management by government agencies do not provide for any special treatment of higher education institutions but they do allow for flexible adaptation to special needs within individual institutions, for example in the form of notes in the budget and explanatory statements." These budget notes allow for savings under individual budget heads to be carried over from one year to the next – but only a very limited amount of transfer between budget heads is permitted. Established staff salaries are paid direct by the *Länder* governments and account for between 70 and 80 per cent of the total expenditure of higher education institutions. Other expenditures known as "recurrent funds for teaching and research" are more directly under the control of institutions. However, "the budget appropriations of such resources run the risk of being cut because, in contrast to the staff plan, they are not laid down on a long-term basis. Thus in 1982 the resources for teaching and research of all higher education institutions (and of universities in particular) were cut considerably." Non-staff recurrent expenditure per student has dropped by 50 per cent in real terms since 1970, thus giving rise to serious concern about the quality of education being offered, in particular by the universities which have suffered the biggest falls.

France's higher education institutions include the *grandes écoles*, each of which is financed by the relevant government department but usually administered by the ministry with responsibility for higher education; and the *Instituts universitaires de technologie* (IUTs), which are separately distinguishable but administratively an integral part of the universities. French universities are not tightly controlled by the government in comparison to some of the other European countries described above. Each has legal independence and its own budget. However, this budget is limited and does not include established staff salaries, costs associated with student welfare, or a part of capital costs (excluded are buildings and, until 1988, furniture). There are differences between institutions in the degree of tutelage to which they are subject in spending these budgets, depending on the category of institution. In general, recent trends in France have increased the financial autonomy of universities with respect to their own funds, largely in order to provide an incentive for them to earn money from external sources. However, they have also reduced institutional autonomy with respect to the recruitment of staff by limiting their powers to employ non-established staff.

In Greece both universities and non-university institutions are legal entities in public law and are "under the full control and responsibility of the state". The institutions each receive their funds from the government in the form of an itemised budget which is negotiated separately by each of them, and very little virement is possible between budget heads. In broad terms, the amount under each budget head is determined incrementally by comparing the proposals of the institution with actual expenditure in the previous year. It is well established that they ask for much more than they expect to get, so that the whole operation takes the form of a series of annual bargains between individual universities and the government. Approved grants as a percentage of initially proposed budgets in 1984 varied from 23 to 94 per cent, with a mean of 52 per cent. Individual bargains, annual budgeting and lack of virement between budget heads result in extreme administrative rigidity and, it is claimed by the universities, inefficiency in the use of resources.

In Portugal also, the funds accorded by the government are subject to legal and administrative regulation in the way they are spent: in general every small payment may have to be authorised by a bureaucracy outside the institutions. This imposes a heavy bureaucratic machine with consequent inefficiency and costs.

Spain is untypical in that virtually all higher education is in the universities. The University Reform Law of 1983 made significant changes in their financial arrangements, mainly in the direction of increasing institutional autonomy. Legally, Spanish universities are now "autonomous administrative entities" and they have their own income and expenditure budgets and a considerable measure of autonomy in the management of these budgets. As is the case in several other countries, capital expenditure and the salaries of established staff are excluded and remain under direct ministry control. However, as a result of the rapid expansion of Spanish universities during the 1970s and 1980s, there have been growing numbers of contract teaching staff who are employed directly by the universities. Before 1983 the main budgeting procedure each year was the attempt by each university to have as much as possible of its expenditure on contract staff consolidated into the regular budget in the following year by showing that it was necessary in order to meet the university's teaching commitments and that it was not possible to meet their salaries from other sources of income. The difference between required expenditure and the sum of consolidated income in the previous year, plus any other income, was made good by the government in the form of a "levelling subsidy". The effect of this was that the lower the supplementary income of any university for a given level of "consolidated expenditures", the greater was the subsidy allocated. "This trend caused, on the one hand, a lack of responsibility on the part of universities to secure their own income, and on the other hand, an encouragement to hide whatever income they did manage to obtain."

Before 1983, Spanish universities were required to abide rigidly by detailed agreements with the Ministry about the contract staff they employed. The Ministry had to approve any modification, however slight. This extreme inflexibility led to irregular practices by the various universities that would flexibilise them: paying irregular bonuses above those authorised, recruiting contract staff chargeable to their own funds above those authorised, internal reclassification of different categories of staff and so on. The effect of the 1983 Reform was first to consolidate all recurrent university expenditures into a single budget, including established staff. Each university now has a Social Council consisting of both academics and lay people which is responsible for the administration of the budget. The only limitation on the Social Council's freedom in allocating the budget is that the total amount of expenditure on staff is subject to approval by the public agencies that allocate funds to universities. In summary, Spain has shifted some way from a system of financial control of proposed expenditure to one of financial accountability for expenditure that has been incurred.

This review of core funding arrangements in OECD countries has shown a wide variety of practices ranging from the market-oriented systems of private universities in the United States and Japan to the closely regulated budgets of the national universities in Japan. The extent of general public subsidy of institutions ranges from less than 20 per cent for private universities in Japan and the United States to over 90 per cent in Denmark, Greece and Portugal. These general public subsidies are primarily for teaching and are in nearly all cases linked explicitly or implicitly to student numbers. The general subsidy to the university sector usually includes also some funding for research, although the proportion intended for this purpose is often not specified and is a function of the interests and teaching commitments of academic staff rather than of national research needs. However, governments in several countries are showing a growing interest in distinguishing more clearly the expenditure on research from that provided for teaching in higher education institutions. This is considered in the next section.

Supplementary Finance

Research

In all countries participating in this study, higher education institutions have some access to finance outside their general core income from public funds. These supplementary funds constitute more than half the income of a few insitutions, a critical part in many, and an increasing part in nearly all OECD countries. Often they are essential for economic viability, and sometimes the fact that they are the only funds available to finance new developments means that they have an influence much greater than the proportion of income they represent.

In several OECD countries the general government core funding of universities is supposed to be sufficient to enable academic staff to undertake some personal research to provide a springboard for the attraction of additional research funds. In Great Britain this was institutionalised in the dual support system. Under this arrangement, the UGC grant contained a considerable but unspecified component for research. Recent comparisons of expenditure per student between universities and polytechnics which, apart from research, are supposed to be funded on the same basis as universities, suggest that between a third and a half of university income must be assumed to be for research purposes. This was intended to enable each university teacher to undertake research and scholarship as well as direct teaching of students, and also to provide "well-found laboratories" and other facilities such as libraries and computing equipment which would allow the universities to bid for grants from the research councils and charitable foundations on terms that required only the direct costs of each research project to be met. This dual support system gave the universities considerable advantages as research establishments, since they could undertake research at lower cost to their sponsors than research institutes, which had to cover all their costs out of research income.

There is usually, but not always, a clear distinction between universities and other higher education institutions in the proportion of core income which is deemed to be for research. Indeed, the extent to which they are funded for research is the most general difference between universities and non-university institutions of higher education in OECD countries. However, the proportion of resources devoted to research in both universities and other higher education institutions varies considerably from country to country.

One country in which there has been a serious attempt to make the funding for research explicit is the Netherlands. In 1982, as part of the staffing and resources formula used to determine the amount of block grant paid to universities, a distinction was introduced between funding of teaching and of research. Most research was no longer funded on the basis of student numbers but on quality criteria. The amount so allocated was 60 per cent of the total first-flow research funds. Initially, the allocation was based on an *ex ante* assessment of research potential, but since 1987 it has been based on an *ex post* assessment of research achievement.

One result of these changes noted in the Netherlands is their effect on academic publication. It is believed that the change of climate is most apparent in the greater drive to publish. University annual reports most generally note rising output figures, relating to research outside as well as within the framework of conditional funding, and researchers are devoting more time to where, when and by whom they should have papers published. This can have a positive effect by leading researchers to reflect more on their work and look at it with a more critical eye. However, there is a danger that excessive emphasis on publication figures may have an adverse effect on quality.

In most OECD countries a considerable amount of university research has traditionally been funded outside the general university budget, and often research councils or foundations have been established by governments and charitable bodies for this purpose, but again there are considerable differences between countries. At one extreme, in Japan there is little research income from outside sources. In 1987, science research grants amounted to only 3 per cent of the total national expenditure on higher education, though it must be remembered that in addition to expenditure on higher education institutions, the Ministry of Science, Education and Culture spends considerably more on specialised research institutes which are not considered to be part of the higher education system. Another country in which the proportion of research income is relatively small is Spain, but a forthcoming reform of research funding is expected to increase it.

In another group of countries about 10 per cent of the income of universities comes in the form of research grants. In Finland, for example, research funds amounting to 11 per cent of total university income were provided by the Academy of Finland and the Ministries of Trade, Environment and Labour in 1987. In Norway in 1987 about 6 per cent of the income of higher education institutions consisted of research grants from the Norwegian Research Council and about 4 per cent research grants from private agencies.

In France, apart from research contracts and the remuneration of academic and research staff by the ministry responsible for higher education, university research is able to draw on two supplementary sources of funding. First the ministry responsible for higher education provides universities with research funds of which about two-thirds are included in quadrennial research contracts agreed between the ministry and the institutions. Secondly, the major research organisations, in particular the National Centre for Scientific Research (CNRS), provide associated university research teams with funds and staff. It is extremely difficult to arrive at a figure of the total research expenditure in higher education institutions comparable to other countries because of this mixture of research funding, some of which is deemed to be university expenditure and some attributed to the associated research teams.

It is in Great Britain and the United States that research grants and contracts make the biggest contribution to the funding of higher education. In the United States just over 10 per cent of the total income of higher education in 1984-85 was in the form of research grants and contracts from federal and state governments and another 5 per cent came from private gifts, grants and contracts. In Great Britain the proportion of university income from research grants and contracts rose from 13 per cent in 1970-71 to 19 per cent in 1986-87. Of this latter figure well over half came from research councils and government departments, and nearly a third from private charities, industry and commerce. The remainder came from private grants and contracts. The corresponding figures for public sector insitutions were considerably lower.

Student Fees

In many countries higher education institutions have two other significant sources of income: tuition fees and income which results from the sale of educational services. Fees are discussed here only as a component of institutional income. The next chapter considers them as part of the cost to students of undertaking higher education. Sales of services include development contracts and consultancy for commercial organisations and government, payments for the use of university facilities and, in some countries, non-traditional courses for which full-cost fees are charged.

There are three main reasons given to justify the payment of fees by students to meet at least part of the costs of higher education: that it is a way of securing additional funds for higher education; that institutions are likely to be more responsive to the wishes of students if they are paying for their higher education directly; and that students are likely to value their education more highly, and in particular to finish their courses more quickly, if they have to meet part of the cost themselves. Of these, the first is the most important in practice, and several countries are considering the introduction of some form of "cost recovery" from students.

Some institutions in certain countries charge fees that cover the full cost of courses, many charge no fees at all, and there is a range of intermediate positions. Amongst the countries studied, those in which for practical purposes no fees are charged to students in the greater part of higher education include Denmark, Finland, France (though there are small registration charges), Germany, Greece and Norway.

The only countries amongst those taking part in this study and in which significant fees are actually paid by students themselves are Japan, Spain and the United States. In Japan, fees accounted for 36 per cent of the income of all higher education institutions in 1985 and there was only a small amount of public subsidy of them. In the United States, fees accounted for 23 per cent of institutional income but a significant part of this was subsidised through loan and grant schemes. In Spain, 20 per cent of the income of universities came from student fees and there was little public subsidy.

Great Britain is in a special position in that although about 14 per cent of university income and 17 per cent of polytechnic income come from fees, virtually all of the fees for home first-degree students are paid out of central government funds. In 1989 the government announced its intention of raising very considerably, to 25 per cent, the proportion of institutional income that has to be "earned" through student fees first by a flat rate of fee and subsequently by fees reflecting some proportion of the actual costs of courses in different subjects. The cost of these fees will continue to be met out of public funds. The aim is simply to change the mechanism by which higher education institutions receive their income. The government believes that fees in themselves are an important factor in institutional income and, therefore, behaviour. It is thought that according greater say to the student recruitment market will:

i) Give institutions a much stronger incentive to compete for and recruit students, and thus help to widen access;
ii) Cause institutions to increase the attractiveness of what they have to offer and improve their ability to market it;
iii) Further diversify institutional income and reduce dependence on a single central government grant.

In Australia a small "higher education administration charge" was introduced in 1986 which amounted in 1988 to A$ 263, or about 4 per cent of average per-student expenditure. This charge was replaced in 1989 by the "higher education contribution" whereby students will be expected to contribute about 20 per cent of the costs of their higher education. They can pay their contribution directly to the institution on enrolment each semester. However, the most novel aspect of the scheme is that former students can choose to have their contribution collected through the taxation system, with no payment required until their personal taxable income reaches the level of the average earnings of all Australians. For most students, this would mean that no payment was required until after graduation. The higher education contribution is therefore not a straight tax on students or graduates. The amount they contribute depends upon the subjects and number of study units they undertake each semester, and is payable whether they pass or fail. Once they have paid their contributions they have no liability to pay any further amount. In other words, students would be paying fees retrospectively. The possibility of fees is also under active discussion in Great Britain and Portugal.

This discussion has been concerned only with students on regular award-bearing first-degree or equivalent courses. The growing number of students in "continuing" or "recurrent" education usually have to pay something approaching the full cost of their fees, either themselves or through their employers. The implicit rationale seems to be that students are entitled to one "dose" of higher education largely at the public expense, but that subsequent doses are either recreational and should be paid for by students themselves; or that doses are specifically occupational and should be paid for either by students, to increase their earning capacity or by their employers in order to improve the skills of their workforce. There has been little serious policy discussion in most OECD countries of the rationale for fee charging in continuing higher education.

One feature of higher education in Great Britain that has differed from most other OECD countries is the existence since 1965 of differential fees for home and foreign students. In 1980, this policy was carried to its logical conclusion and foreign students were charged fees that were calculated to cover the full cost of their courses. It made foreign students very attractive to universities whose other income was being cut. This full-cost policy was followed by various targeted scholarship programmes which enabled the government to concentrate its subsidy on those students who were thought to be most appropriate to national policy priorities: students from developing countries; research students; or those from certain Commonwealth countries where higher education is insufficiently developed to meet student demand and potential national leaders. This was the first significant attempt by a British government to use grants policy as a way of influencing the pattern of teaching of higher education institutions.

Since 1980, some other countries have also begun to develop conscious policies with respect to students from abroad. In several countries the sale of higher education courses to foreigners is now seen as a significant potential source of income. Australia has made some of the most conscious efforts in this direction. The Australian government is moving away from the policy which involved each higher education institution having a quota of foreign students who are allowed to pay a subsidised fee, such that any students above this quota paid a fee estimated to cover full average costs. The new policy will see existing federal higher education aid subsidies phased out in favour of a system of scholarships (which will meet full average costs), starting in the 1990 academic year.

In the United States there is no differential fee for foreign students as such, but students in state universities and colleges who are resident outside the state are required to pay a much higher fee than local students. Foreign students have to pay this higher rate of fee. Hence, the recruitment of students from outside the state is an attractive economic venture in American universities and many concentrate considerable marketing efforts on those countries which are significant sources of students. The huge increase in the number of students from mainland China following the political opening up of that country owed much to the marketing skills of American academics and university administrators.

The stated Japanese government policy of recruiting 100 000 students from other countries by the end of the century has received much attention in other OECD countries. In this context, the Japanese government is planning various programmes of grants, tuition fee reduction, accommodation and other welfare services to support foreign students who have no scholarships, taking account of the expected increases of privately-funded foreign students.

Other Income

Income from the sale of educational and research services is only a small part of the income of higher education institutions in most countries, but it is in this area that much of the interest in new funding mechanisms has been concentrated and most worries expressed. The majority of the countries taking part in the study have seen an increase in both the amount and the proportion of income emanating from such sources, though usually from a very low base. Many have taken measures in recent years to make it easier for higher education institutions to earn revenue by selling their services.

Universities in four countries in particular have traditionally obtained significant supplementary external income in addition to academic research: Germany, Great Britain, the Netherlands and the United States. Comparisons of the amounts involved are, however, very difficult because of different statistical definitions and financial accounting practices.

German universities have developed the concept of third-party funds. These are funds held in special accounts on behalf of the professors who are responsible for undertaking the research or consultancy. For statistical purposes the Scientific Council distinguishes between seven categories of fund-giving third parties: institutions for the promotion of research which are mainly funded by the government; federal ministries; *Länder* ministries; financial support for junior researchers from federal and *Länder* governments; international organisations; charitable foundations; industry and trade associations.

Income from such activities increased by 50 per cent in real terms between 1970 and 1985 and accounted in total for about 30 per cent of the resources of higher education institutions in 1985. Of this the contribution from industry has more than doubled in real terms during the 1980s, and in 1985 accounted for about 6.5 per cent of the resources of higher education.

In the Netherlands the revenue of higher education institutions is conceived as three flows of funds. The first flow is the main core funding from government and on average amounted to three-quarters of the total in 1985. The second is additional funding from government departments for particular purposes and accounts for about 3 per cent of the total. The third flow of funds corresponds broadly to the sale of services being considered here and amounts to about 8 per cent of the total. The remainder is accounted for by student fees.

In Great Britain a distinction is made between research contracts from industry, which in 1986-87 accounted for under 3 per cent of university recurrent income, and income from the sale of "other services" which also remained at under 3 per cent of the total during the 1970s and which has since then risen sharply to over 6 per cent. This income comes almost equally from short courses, medical services and the provision of other services such as the hire of university laboratory facilities. Polytechnics' revenue from "trading", which includes all these categories of income, is now over 7 per cent of their total income. The British government has on several occasions in recent years expressed its hope that these figures will rise considerably in the future. In the White Paper which preceded the Education

Reform Act of 1988 the government stated that its proposal to replace higher education institution grants with a system of contracts was intended in part to "encourage institutions to be enterprising in attracting contracts from other sources, particularly the private sector, and thereby to lessen their present degree of dependence on public funding".

In the United States, where the concept of higher education institutions as economic enterprises selling academic services is better established than in any other OECD country, the figures, although not strictly comparable, are undoubtedly higher. "Sales and services" by higher education institutions (excluding research contracts) accounted for 17 per cent of their income in 1969-70, and by 1984-85 this had risen to over 21 per cent. There was not a great difference between the public and private institutions. The 1984-85 figure was 20 per cent for the former and 23 per cent for the latter. These United States figures, unlike those for Great Britain, include "revenues generated from... such auxiliary enterprises as athletics, student residence facilities, cafeterias, and campus bookstores".

In other countries taking part in this study the contributions from such sources are significantly lower, but there is a growing interest in expanding income from such sources. In Australia for example, the report of the government Committee on Higher Education Funding proposed that: "Employers and Industry also benefit and should contribute directly to the cost." Specifically, the Committee recommended that:

- The Australian Confederation of Trade Unions and peak employer bodies be encouraged to examine the inclusion of higher education support arrangements in wage negotiations;
- The government establish, on a pilot basis, an allocation from the funds for growth to provide matching grants to institutions for joint courses with industry;
- The government encourage the use of industry offsets policy to increase contributions of funds and equipment by industry to higher education institutions.

In Denmark, where there is at present little funding of higher education from outside government, the "traditional system [of finance] is being supplemented by resort to new sources and structures. Up until now the most important factor in this development has been the set of rules governing the sale of external services, which breaks with the main principle in the public budget and appropriation system whereby any income is to be paid to the treasury and cannot be used by the institutions. The new rules enable institutions, if they find the necessary means, to extend traditional activities or to embark on new ones, such as special courses and consultancy services".

Universities in Finland also have begun to earn income from a wide range of non-traditional activities. "The growing demand for contract research and other expert services has led to the installation of various technology centres and complexes in university towns. The institutions are involved in this activity as shareholders. Some institutions have created business enterprises, because these offer more flexible financing and book-keeping than their regular administrative and accounting procedures. These firms sell research and other expert services." This type of activity, which allows the universities to make a more flexible use of their funds, will probably grow in the future.

In France one of the striking developments of recent years has been the growth of higher education funding by local communities, in particular in the form of building costs to encourage the establishment of new institutions in the locality. French higher education has also experienced a growth of funding from industry and commerce and the establishment of commercial enterprises by universities which were legalised by the Higher Education Law of 1984. As in Finland, one of the main aims is to provide more management flexibility than is possible in universities that are closely regulated by public authorities. By the beginning of 1988 about 25 such enterprises had been registered under the Law. Most of them were concerned with some aspect of high technology, although some have been set up in order to be able to undertake business consultancy on a commercial basis. The French report remarks that it is too early to say how successful these new ventures have been, but it was intended to undertake an evaluation in 1989.

In Japan there have been debates at high governmental level about the desirability of changing the legal status of the national universities and transforming them into "special juristic persons", which would enable them to control their own budgets and to supplement them from any appropriate source. However, so far this proposal has not been accepted, partly on the grounds that the examples of the private universities and colleges show that independent status does not necessarily induce organisational efficiency or vitality. An expert committee appointed by the *ad hoc* Council on Education in 1987 concluded that desired changes in the national institutions may be achieved within the present legal status. The Ministry of Education, Science and Culture (MOESC) can create special finance codes which make it possible for research grants and contracts from private businesses to be put into special accounts rather like the German "third-party funds". There has been a steady increase in such funds during the 1980s, but in 1985 they still accounted for less than 4 per cent of the total income of higher education institutions. Another innovation introduced in 1987 makes it possible for private individuals and organisations to "donate" Chairs which are intended primarily to provide funds for part-time visiting professors or associate professors. Finally, the MOESC has made it possible for the national institutions to establish an "attached foundation" which "typically established upon contributions from private corporations and the alumnus, would contribute to academic activities not supported by official budgets."

During the past decade several Portuguese universities, especially the newly established ones, have tried to increase their incomes by operating as service enterprises selling their research services to private or public organisations. Such activities account for about 6 to 8 per cent of total university income. A working group of the Ministry of Education has recently been established to study alternative sources and new mechanisms for financing higher education. Its report is expected to propose methods for cost recovery and additional sources of financing. The points to be addressed include tuition and examination fees, social charges, revenues from "customer contracts", consulting activities and adult education.

Summary

This chapter outlined the existing arrangements and recent trends in the funding of higher education institutions in the OECD countries that agreed to take part in this study. There are six main points:

i) In most OECD countries there was some increased financial stringency in the provision of public funds to higher education between the early 1970s and the mid-1980s. In several countries this stringency has been relaxed in the last few years, associated partly with the development of new sources of funds. Only Finland and France, however, report the likelihood of increased public funding for higher education in the foreseeable future.

ii) There is a distinction between private control of higher education institutions, and private finance of institutions. Only in Japan and the United States do private institutions constitute a substantial part of the total provision of higher education

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at present. An important difference between the two countries, however, is that in the United States, average expenditure per student in private universities is 60 per cent higher than in the public institutions, whereas in Japan it is 50 per cent lower. In some European countries there remain a few universities controlled by the Church. For the most part, however, in European countries the trend until the early 1980s was for universities which were private to be gradually absorbed into the public sector as they became more and more dependent on public funds. There has been some move in this direction in Japan through the "current costs subsidy" to private universities. However, this still constitutes only a small proportion of the total income of these universities.

iii) In all countries except Spain there is a substantial non-university sector of higher education, and much of the expansion since the 1970s has been in this sector. In some countries it now accounts for more than half the total number of students enrolled. For the most part these institutions focus more on professional preparation, and less on research, than the universities and are funded less generously.

iv) In several countries there has been a shift towards more sharply focused targeting of central core funding of institutions out of public funds. This has often been accompanied, however, by increased financial and administrative autonomy for the institutions.

v) In some countries there has been discussion of the possibility of charging fees to students as a way of contributing towards the cost of higher education. However, at present only in Japan, the United States, Spain and Great Britain does fee income constitute a significant percentage of the total income of higher education institutions. In Great Britain, fees for nearly all home and undergraduate students are paid out of public funds. In most countries, however, full-cost fees are charged for "continuing" or "recurrent" education. In Australia it is proposed to charge former students retrospectively for the costs of up to 20 per cent of their higher education through a levy on their higher earnings.

vi) There is growing interest in most countries in enabling and encouraging higher education institutions to seek supplementary sources of funding. This process has gone furthest in the United States where "marketing" is a major concern of nearly all institutions. In Great Britain, Germany and the Netherlands universities also receive substantial supplementary funds from a wide variety of sources. In several countries there have been changes in legal and administrative arrangements to permit and encourage institutions to seek outside funding.

The implications of these patterns of finance and the changes in them are discussed in Chapter 4.

Chapter 3

FINANCIAL SUPPORT FOR STUDENTS

Why Support Students?

There are two opposed economic interpretations of higher education. The first is that universities are essentially service institutions provided by the community for its own good and that no charge should be made at the point of delivery. The second is that they are commercial enterprises selling educational services for the benefit of individuals. This distinction is applicable for both their teaching and research functions. The previous chapter showed how there has been a move away from the concept of research as an activity undertaken by universities in the normal course of their work for the benefit of society as a whole, towards the idea that it is something that brings advantages to particular groups or individuals who ought, therefore, to pay for it. Similar views have been expressed about teaching, but in most countries the provision of initial higher education is still considered to be a public service responsibility, and access to it a "right" for suitably qualified young persons. However, there are moves to commercialise some aspects of teaching, particularly the provision of employment-oriented courses for older people.

Higher education as a public service may be provided by an organisation such as a church or a political party in order to disseminate a particular ideology or, more frequently in the twentieth century, by the state in the collectivist belief that higher education is a service whose benefits ought to be available for all. This point of view involves at least an implicit acceptance that the terms on which the service is provided should be determined by academic professionals supplying the service, and mediated, but not controlled in detail, either by students or by elected politicians.

This view of higher education dominated the economics of education and educational planning during the period of very rapid expansion in the 1960s and early 1970s. There was a widely held belief that only governments could provide the resources necessary to produce the rapid expansion in the number of highly-qualified people that the fast-growing economies needed, and that only experts could determine exactly what training was needed. The human capital model was able to demonstrate that private expenditure alone would be unlikely to lead to the optimal social investment in higher education. The fact that many able people could not afford to invest in their own higher education would, it was believed, lead to waste of potential talent. Apart from this, in most OECD countries it was considered unfair and unacceptable that young people should have opportunities denied them because their families had insufficient resources to pay for their higher education. There was, therefore, during the quarter-century following the end of the Second World War a general trend for governments to take increasing responsibility for the finance of higher education. However, during the 1980s this reasoning has begun to be questioned in several countries, and there is growing interest in schemes of "cost recovery" to reclaim from students at least part of the costs of their higher education. The two main aims of this chapter are to explore the reasons for this change of emphasis in more detail, and to outline the current systems of student support in the countries taking part in this study.

There are several related issues: the first is the proportion of higher education expenditure met by tuition fees. The second is whether these fees are actually paid by the students or their families, or whether they are subsidised out of public funds. The third is the living expenses of students while they are studying. This chapter is concerned primarily with the third issue. Broadly, students' living costs can be met in four ways: by the students' families; by students' earnings; by students borrowing money and repaying it after completion of their studies; or by subsidies from public or private agencies. All combinations of these are possible and, in the United States in particular, many students use all of them.

In the most extreme version of the public service model, fees are low and students receive considerable public subsidy to help them with their subsistence costs while they are studying. This model corresponded to the situation in several European countries during the early 1970s. At the other extreme, students pay their own fees and their own living costs, perhaps borrowing the money for this and repaying it later out of their higher earnings. This model is gaining ground in several countries. It describes in many respects the situation in Japan. However, no OECD country operates a pure version of either model: some grants are available for students in Japan, and in no OECD country is it possible for any significant proportion of students to undertake higher education at no cost at all to themselves or their families.

Tuition Fees

In Japan, student charges account for almost half of the total income of higher education institutions though, as noted in Chapter 2, there is a big disparity between the public and the private institutions, with only 9 per cent of the income in the former and 67 per cent in the latter coming from this source. Only a small proportion of these fees is subsidised out of public funds. A recent White Paper on living standards has estimated that educational expenditures account on average for more than 34 per cent of Japanese family expenditure during the peak years when all children are in secondary or higher education. Despite this, Japan has one of the highest rates of higher education participation in the OECD countries, and nearly 80 per cent of total enrolments are in private institutions.

At the other extreme are several European countries where no fees are charged for first-degree courses. This group includes Denmark, Finland, Germany, Greece, Norway and Portugal. In Finland, Greece and Norway there has been little serious discussion of future possibilities of charging for tuition for basic higher education. In Denmark and Germany there has been some discussion of the issue, but it is unlikely that there will be any significant shift in the direction of fees for regular courses in the foreseeable future. In 1987 the Danish Minister of Education expressed the view that "by means of the payment principle we counteract the 'educational inflation' which always occurs when those who make the demands do not themselves feel the cost of their implementation. Particularly, further education courses will be characterised by employer and user payment which at the same time will ensure responsiveness to the changing needs of the users and the trades." This seems to indicate that fees will be restricted to "further education" or to courses *other* *than* traditional initial degree courses. In Germany, where the matter has also been discussed in the context of combating the increasing restraint on public higher education expenditure, the prevailing view is that the forthcoming shortage of students resulting from the decline in the birth rate makes it extremely unlikely that any significant system of tuition fees will be introduced for at least a decade. There are also provisions in the German Constitution which would make it difficult to introduce fees for initial courses of study. The German report concludes, however, very similarly to the Danish, that "as far as courses of continuing education are concerned – which are becoming more and more important as they are in other countries – such models [of fee paying] can and should be tested."

In Portugal there is a growing body of opinion that not only would the introduction of fees increase the resources available for higher education, but it would also increase efficiency. The payment of tuition and examination fees by students is justified on the grounds that they are likely to be more careful in their working habits and in their choice of courses. On the other hand, higher education institutions are likely to take more care to meet their needs if a significant part of institutions' income is derived from fees. The Portuguese authorities recognise, however, that any scheme that involves payment of significant fees would, for reasons of equity, certainly have to be accompanied by some form of fee subsidy.

France and Australia are two more countries which also charge no tuition fees, but both countries do impose small registration or examination charges and the position in Australia is currently undergoing radical change. French universities have a long tradition of providing free higher education. They have not, since the nineteenth century, charged significant fees to students on regular degree courses and the issue is politically highly charged. It is, therefore, extremely unlikely that there will be any significant rise in the charges made to students on regular first-degree and similar courses. However, in France, as in Germany and Denmark, continuing education students or their employers pay most of the cost of their courses, usually within the framework of agreements between the higher education institutions and employers or other social partners.

In Australia the no-fees tradition is less well established. In the post-war period, tuition fees were an integral element of funding arrangements in higher education. In 1973 fees represented around 15 per cent of course costs. However, only 20 to 25 per cent of full-time students actually paid tuition fees. The fees of the remainder were met through Commonwealth and State scholarship arrangements. A substantial number of part-time students also received relief from fees. It has been estimated that in total some 60 per cent of all students did not pay fees in 1973. It was largely as a response to the anomalies of such a system that the Commonwealth Government abolished fees in 1973. However, only 13 years later in 1987, student charges were reimposed in the form of the "higher education admission charge" which in 1988 amounted to A$ 263 per student, or 4 per cent of total expenditure per student. The fact that this charge was set at the same level for both full-time and part-time students aroused some controversy: it was thought to discourage the latter, particularly as most part-time students received no income support. The recent decision to introduce a "higher education contribution scheme" has been discussed in the previous chapter in the context of the funding of institutions. As far as student finance is concerned, the main issue is whether such a scheme will discourage people, especially older students, from undertaking higher education courses. Proponents of the scheme point out that the contribution is required only from people whose personal earnings are at least equal to the average for the whole workforce, so there is little reason for any distinctive effect. Opponents say the effect will be psychological and that it will be a bigger disincentive to older students and in theory at least to those young people whose ability makes it likely that they will earn above-average rates of pay, whether or not they undertake higher education.

In Spain from 1978 onwards there has been a trend towards an increment in contributions from academic fees, and these now account for about 20 per cent of university income, with most of this being paid by students themselves. It is thought that the figures are likely to stabilize at this level and that there will be little further increase in fees for basic courses.

The United States position on tuition fees in somewhere between the continental European countries and Japan. In 1984-85 they accounted for 15 per cent of the income of public institutions and 39 per cent of private institutions. However, there was a wide disparity between different states, particularly as far as the public institutions are concerned.

> "In the New England states, where a strong tradition of private higher education was forged early in American history with the founding of institutions such as Harvard and Yale, tuition charges for public university students tend to be rather high, half or more of the total cost of education. The Midwestern and Western states, however, developed later in American history and were strongly influenced by the kind of populist sentiment that gave rise to the public land grant colleges and universities in the mid-nineteenth century. Consequently, one tends to find low tuition charges in these regions. In California, for example, students pay only $100 per year in fees to attend any one of more than 100 two-year community colleges. To cite another example annual tuition and fees at the world-renowned University of California-Berkeley were only $ 346 per year in 1987, compared with $3 198 at the University of Vermont."

However, students in the United States, unlike those in Japan, are heavily subsidised. In 1984-85, total financial support available to students from all government sources amounted to three times the fees paid by students. Of course, many students receive grants and loans towards living expenses as well as fee subsidy, but since no state provides a fee subsidy covering more than a small part of the tuition costs of some of the prestigious private institutions, it would be far from true to claim that tuition fees impose little burden on any American families. It certainly is true that in total this burden is much less than in Japan.

In the Netherlands there has been considerable discussion of fee policy in recent years. Tuition fees are set by the Minister of Education on a national basis and do not vary from one institution to another. The amount individual institutions receive in fees is deducted from the grant they obtain from the Ministry. In 1984 the Minister of Education and Science issued a policy memorandum entitled *Towards a New Policy on Educational Fees* which proposed setting the fees payable by students aged 16 and over at a fixed percentage of operating costs. This meant that, given the cost difference between university and higher vocational education, different tuition fees would be payable in the two sectors. Since 1988 the tuition fees at universities and higher vocational institutions have been harmonized and the link with operating costs abandoned. Effect has also been given to the plan, previously announced, to place a six-year limit on students' rights to follow undergraduate courses (in either sector) at a reduced rate of fee; thereafter, a higher rate is to be applied. In 1985, fees paid by students accounted for 12 per cent of the income of higher education institutions.

Towards a New Policy on Educational Fees cites the following grounds for subsidising education:

- Education has external economic effects, i.e. it brings social as well as private benefits.
- Education is a merit good, i.e. it is of general cultural importance in itself.

- Education contributes to social justice by enabling everyone to make a good start in life.
- Innovation in education, e.g. the introduction of new courses, may require start-up grants.
- Charges to students make possible a lower level of public spending on education.

In determining fee rates, the Netherlands government was concerned with the following principles:

i) Charges must not restrict access to education for the less well off. For students over 18 years old and covered by the Financial Aid to Students Act, under which financial assistance is in part independent of parental income, there is a uniform charge for each educational sector. For those under 18 the charge is generally related to parental income.

ii) No charges are payable by those of compulsory school age. Fees for pupils in compulsory full-time education, i.e. aged up to 16, were abolished by the School Fees Act 1955. The political choice was made not to levy charges in respect of those under 16, though such a step would have been possible in principle.

iii) Those who derive private benefit from education should bear part of its cost (the "beneficiary pays" principle). The amount payable by individuals should reflect the benefit they receive, and since this benefit varies from one sector to another, it was decided to set different charges in secondary, higher vocational and university education.

Until 1988, educational fees in the Netherlands were set at 15 per cent of the average operating costs of each category of institution. The 15 per cent norm was also applied to part-time professional education outside the universities, but here the charges levied differed between courses. In the case of university education, no cost distinction was made between part-time and full-time study, on the grounds that part-time students in principle had the same rights with regard to teaching and examination facilities as full-time students, and that no distinction was made in funding between full-time and part-time students.

A number of changes were introduced with effect from the start of the 1988-89 academic year:

i) Undergraduate students now pay the same tuition fees whether they are at a university or an institution of higher vocational education. The fees are no longer fixed as a percentage of operating costs, although in total they amount to about 15 per cent of the whole income of institutions.

ii) The maximum period for which undergraduates may be enrolled as full students (during which they are entitled to financial assistance) is now limited to six years of full-time courses and nine years for part-time courses, or 54 Open University modules. Graduates moving on from the university to the higher vocational sector or vice versa once their initial six years are up are entitled to financial assistance for at most a further three years (full-time). Universities may offer two-year degree programmes to higher vocational graduates.

iii) An individual may remain in higher education after his or her support entitlement is exhausted, enrolling as an occasional student and retaining the same tuition *and* examination rights as any other student. However, no further financial assistance is given towards living expenses, and the tuition fee is increased by 40 per cent.

The development of fees policy in the Netherlands has been reviewed here at some length because it raises several issues which are being considered in a number of other OECD countries. These include: the proportion of total higher education costs that should be paid by students; whether fees should be related to the costs of different courses or sectors of higher education; and whether entitlement to subsidy of any kind should be limited to the "normal" period it takes to complete a course.

In Great Britain also there has been active consideration of fees policy in recent years. At present, fees for students from the United Kingdom (and the European Economic Community) are set at levels which account for less than 10 per cent of institutional income, but for nearly all British first-degree students these fees are reimbursed out of central government funds. This arrangement has been the subject of considerable discussion during the past quarter-century. The Robbins Committee which reported in 1963 believed that higher education institutions would be more independent and likely to be more efficient and more responsive to the needs of society if they depended to a significant extent on the fees of students. The Committee suggested that about 20 per cent of institutional income should be derived from fees. They took the view that "it is a source of strength that public finance should come through more than one channel". It is also the case that when a significant proportion of the income of higher education institutions depends upon student fees it is in their interests to attract more students and to offer courses that meet student preferences. This was not the same as recommending that students, or their families, should themselves bear the costs: individual student fees can be subsidised as easily as direct grants to their institutions. However, the fact that fees derive ultimately from public funds has led some observers, for example the Jarratt Committee which reported on university management in 1986, to recommend that they should be abolished entirely.

Fee policy in Great Britain has varied considerably over the past two decades. Until the mid-1970s, students from rich families had to pay their own fees according to a sliding scale based on family income. For a short period in the late 1970s, home-student fees were raised to a level where they accounted for nearly 25 per cent of the income of higher education institutions. This represented an income in some universities that was higher than marginal costs, particularly on courses that were not recruiting well. After 1981 this was felt to be incompatible with the UGC policy of restraining university student numbers in order to maintain average expenditures per student at a level which would protect the traditional high quality of British university education. There was also concern in the government that expenditure on students' fees was open-ended and could not easily be subject to cash limits. Government was therefore persuaded to revert to fee levels for home students that covered less than 10 per cent of the costs. This policy has now been reversed and, as explained in Chapter 2, the government has announced its intention of channelling a substantially increased proportion of its financial support for higher education through subsidised student fees.

Financial Support for Students' Living Costs

In terms of real resources, the income foregone by students while they are studying is usually the biggest private cost of higher education. Even if the education itself is provided free of charge, there are many people who cannot afford to study unless they receive some financial help with their living expenses. There have always been a number of scholarships to allow able young people from less affluent families to maintain themselves while being educated up to the highest levels. These scholarships were provided by religious bodies, by private patrons and by governments, partly for altruistic reasons and partly to ensure a supply of highly-educated manpower for the sponsors. It was only after 1960, however, in most OECD countries that this relatively small-scale philanthropy was replaced by the realisation that mass higher education meant not only free education but also some form of income replacement for much larger numbers of students. There developed during the 1960s a proliferation of schemes of student financial support including grants, loans, work-study and subsidised food and accommodation.

Grants

Amongst OECD countries the provision of grants for students out of public funds has been the principal form of student support in Great Britain and Australia throughout the past 25 years. In Australia, grants have never been available to the majority of students, but in Great Britain since 1961 all first-degree students have qualified for a grant out of public funds.

Between 1974 and 1987, income support for Australian students was provided by the Commonwealth Government through the Tertiary Education Assistance Scheme (TEAS). This was an income-tested scheme in which eligibility and level of benefit depended on family income. In the first year of TEAS, 31 per cent of full-time higher education students were eligible for some degree of support. This proportion increased gradually to 41 per cent in 1978, declining to 35 per cent in 1982, then rose again to just over 38 per cent in 1986, the last year of the scheme. In 1987 it was replaced by AUSTUDY as part of a move to link gradually the maximum levels of financial support for students to unemployment benefit rates (which in Australia are non-contributory and are payable to school-leavers after a qualifying period). The effect was to raise the level of the maximum grant quite considerably. Parity of maximum levels for young people under 21 was achieved in 1988. A first step towards parity for those aged 21 and over has been taken in 1989, with higher AUSTUDY rates (equivalent to unemployment benefit rates) being payable to some especially disadvantaged groups. The conditions of eligibility for AUSTUDY are essentially the same as those for TEAS. In 1987, 39 per cent of full-time higher education students were assisted under the AUSTUDY scheme. It was the cost of funding additional higher education places that led the Australian government to set up a Committee on Higher Education Funding under the chairmanship of a senior politician in December 1987. The Committee's report in April 1988 recommended the establishment of the "tax debit" scheme outlined in Chapter 2 by which former students will contribute to the costs of their higher education as soon as their income rises above the average for manual workers.

In contrast to Australia, the student grant scheme in Great Britain has remained largely unchanged since it was established in 1961. It requires local education authorities to provide mandatory grants to all full-time students on degree-level courses in universities, polytechnics and other higher education colleges, and permits them to make discretionary awards to those who do not meet the requirements for mandatory grants: part-time students, those on non-degree courses, or those who have already undertaken a course of study with the help of a grant. The mandatory grants are funded almost entirely by central government and cover the cost of any fees that students are required to pay as part of their courses, and their living expenses. The living expenses component of the grant is means-tested, i.e. the level of the grant actually received depends on the family income of the student. The difference between the grant which is estimated as necessary for the student's maintenance during the course of his or her studies, and the actual grant the individual student receives, is supposed to be made good by what is known as the "parental contribution". The means test has been applied with increasing severity since 1979, and parental contributions now represent 37 per cent of the total estimated student maintenance costs, compared with 20 per cent in 1979. In other words, central government now meets 63 per cent of the total maintenance costs of students, compared with 80 per cent in 1979. This is still a very high figure when compared with other OECD countries.

There has been considerable criticism of the grant scheme in Great Britain in recent years. The most widespread is that the declining real value of the grant and the increasing severity of means-testing has resulted in a large number of students suffering financial hardship. If the maximum grant is compared to that offered when the scheme started in 1962, there has been a fall of 20 per cent compared with retail prices, 30 per cent compared with average rents, and nearly 50 per cent compared with average earnings and the price of books. At the same time, however, the proportion of national income devoted to student grants has increased by 150 per cent since 1961 because of the huge rise in the number of students on courses which qualify for a grant.

Another criticism is that the present grant arrangements discriminate against part-time students and those on courses other than traditional three- or four-year honours-degree courses. The courses for which mandatory grants are payable are designated very precisely in order to prevent abuse of the system. This inhibits innovation in that any potential student demand for new courses is unlikely to be realised if they are not eligible for mandatory awards, which in turn means that there is no incentive for the institutions to attempt to introduce new types of course. In brief, the British system of relatively generous grants for all students on traditional higher education courses is not well suited to mass higher education. It is essentially an extension of the scholarship principle to a larger number of students, and takes little account of the much greater diversity needed when more than 20 per cent of the population enter higher education at some time during their lives, and when many of these students are not studying full-time and many are not immediate school-leavers.

It is such considerations that led the British government to issue a White Paper on student financial support in November 1988. It proposes substantial changes, including the introduction of a loan scheme which would enable students to top up their grants with repayable loans. The scheme is being introduced on a sliding scale so that if there is no subsequent change of policy, students on first-degree course will receive about half their support in the form of loans by the first few years of the twenty-first century.

Another country which has used grants as its principal form of student support for some of the period during the past two decades is Germany. Financial aid for students in Germany goes back to 1957 when, following a meeting of university presidents at Bad Honnef, the *Honnefer Modell* was introduced as a state-financed assistance scheme for students, offering grant-based financial aid on the basis of "above average" academic performance and financial need. In 1971 the *Honnefer Modell* was superseded by the Federal Education Assistance Act which removed the requirement for above-average academic performance and gave students who qualified on financial grounds the *right* to a grant rather than mere eligibility for one. Initially the financial support took the form of non-repayable cost-of-living subsidies. In special circumstances, such as when authorised study periods were exceeded or when a student wished to do a second course, the scholarship was able to be supplemented by a repayable loan. However, the world economic upheavals of the early 1970s almost immediately wrecked these arrangements and from 1974 onwards support to students has been made only in the form of repayable loans.

France has a well-established system of grants and this is supplemented by loans. Grants are, however, relatively low and available for only a small proportion of the total student population. Families are deemed to have the responsibility for maintaining their children until they have finished their studies, and any grant is supplementary to family allowances. In 1987-88 the level of grant varied between FF 3 834 and FF 13 248 per year, depending on family circumstances. Even the upper figure falls far short of giving the student financial independence. The proportion of university students receiving these grants is modest, reaching 16.6 per cent in 1987-88 after having risen from 13 per cent in 1981-82. However, in the IUTs and the *sections de techniciens supérieurs* the figure was higher: between a quarter and a third of all students in these institutions received grants, thus indicating that students from less wealthy families attend them. In addition to grants, a very small number of interest-free loans are available for students who have special needs. They are allocated by the rectors of each academy (which in France corresponds more or less to an administrative region) and they have to be repaid within ten years. Another important form of financial support to students in France is indirect subsidy. This is discussed in a later section.

In Portugal there is a system of scholarships, but less than 10 per cent of students received scholarships in 1986-87, and for most of these the grant did not cover their full living expenses. In Spain and Greece also, there are at present only very limited schemes of student scholarships.

Student Loan Schemes

As is apparent from the previous discussion of scholarships and grants, there is a marked trend towards loans as the appropriate way of offering students direct financial support for their living expenses while they are studying. The Scandinavian countries led the way. All three of the Scandinavian countries in this study have had loans as the key component of their student support schemes for many years, but all have other forms of financial assistance as well.

In Finland "the study support system comprises *i)* state grants, *ii)* guaranteed loans with the interest being subsidised by the state and *iii)* other social benefits that lower personal living costs". In this package loans are by far the dominant component. In 1986-87 the maximum amount of assistance a student could claim was a $3 100 loan, a basic grant of $595 and a $775 housing allowance. The level of grant and housing allowance depends on family income. Loans are obtained from banks on application by eligible persons, and interest is charged at a specially reduced rate (3.25 per cent in early 1988) from the time the loan is taken out. Eighteen months after the completion of studies a higher (but still subsidised) rate of interest is charged (6.25 per cent in early 1988). Repayment must begin within two years of graduation and should be completed within ten years of the first repayment. The average amount of debt of new graduates in 1986 was $11 000.

Despite the fact that a large proportion of student financial support is in the form of loans, one of the problems of Finnish higher education in recent years has been that students take longer than the prescribed periods to complete their courses. It is believed that this is in large part because the funds available to students are insufficient to maintain them at a reasonable standard of living and, therefore, they are forced to take temporary jobs which distract them from their studies. One of the current issues is how to devise an aid scheme that would encourage completion of courses within reasonable periods of time without being excessively expensive or politically unacceptable.

The position in Denmark is rather similar: the first scheme was the Youth Educational Fund which was established in 1952. It was essentially a scholarship scheme and the number of students involved was very small. The scheme was extended at the beginning of the 1960s largely because of the widely-held view at that time that there was a close connection between education and economic growth. In 1964 the first state guarantee scheme for bank loans for students was established, but financial aid still reached only a minority. In 1970 the State Educational Support Agency was founded and interest-free loans made available to all students according to specified formulae, depending on age and financial circumstances. However, in 1975 the economic crisis caused the abandonment of the interest-free component. Aid to students now had three well-defined objectives: equality of opportunity, increasing the number of students in order to meet economic objectives, and "the internal optimisation of the educational system". This last statement was based on the belief that previously, students had needed to spend so much time working in order to live that, even though the experience of work was considered beneficial, it had nonetheless interfered with their studies to an unacceptable extent.

Financial support to students in Denmark has three components: grants, state loans, and a state guarantee for bank loans. In contrast to Finland, however, the grant is the biggest component. There is a maximum limit to the state grant which in 1986-87 was DKr 15 800 for students living at home and DKr 26 000 for those away from home. In addition, students may claim a state-guaranteed loan of up to 50 per cent of the grant. During the period of study the loan carries an interest rate at 3 per cent below the prevailing bank lending rate, and after completion of study the rate rises to 1 per cent above bank lending rates. Students also have the right to state-guaranteed bank loans which are not means-tested. However, the interest on these loans is determined by the bank, so that the only subsidy is the state guarantee which eliminates the risk element for the bank. Repayment of all loans must begin within one year of completion of studies and completed within 15 years. One of the main problems of Danish higher education in recent years has been the large number of former students who are experiencing difficulty in repaying their loans at the prescribed rates. It is probable that a radically revised scheme of student support will be adopted. The state-guaranteed bank loans will be abolished, and support will consist only of state grants and state loans. The grant component will increase. Older students will no longer be dependent on their parents' income in determining their eligibility for a grant or loan.

The Norwegian system of student aid also has three main components: subsidised loans, individual grants and welfare subsidies. Loans and grants are means-tested but the majority of students qualify for loans. In 1986-87, 80 per cent of students received loans and a somewhat smaller percentage received grants. The average size of grant was NKr 7 500, while the average size of loan was NKr 30 000. Although the programme has expanded during the last ten years, rises in the interest rate have reduced the real value of loans to individual students. This is said to have increased the propensity of students to take paid work while they are studying, with damaging effects on their studies. It is believed that fear of excessive debt is now preventing some students from taking loans to which they are entitled and from which they would benefit. As a result, the government has proposed changes that would make repayment partly dependent on the graduate's ability to pay.

The Norwegian grants and loans system is administered by the State Bank for Student Loans. In 1987, half its payments were for grants and half for loan subsidies. Loans are free of interest till graduation, after which they must be paid off within a period of 20 years. Payments may be postponed where the borrower has some justifiable cause. The interest rate charged is some 4 to 5 per cent lower than the usual rates of interest for private loans from commercial banks.

Non-Scandinavian countries with substantial loan schemes are the Netherlands, Germany and Japan. In the Netherlands, grants are supplemented by loans. Full-time students between 18 and 30 years may receive a basic grant that is independent of family income (this includes various allowances to cover expenses), a supplementary loan (repayable with interest), and a supplementary grant that does depend on the student's financial circumstances. At present the basic grant amounts to about 38 per cent of the estimated necessary expenditure of students, the loan 43 per cent, and the supplementary grant 19 per cent. Loans were previously interest-free but graduates now pay an interest rate 0.5 per cent below the market rate established by the government. Repayment must start within two years of graduation and should be completed within 15 years of that.

As noted in the previous section, German students in the early 1970s went through the somewhat traumatic experience of having a full grant system similar to the British model promised in 1971 and, less than three years later, seeing it transformed completely into a loan scheme more complete than any in the Scandinavian countries. Apart from post-graduate and foreign study scholarships, loans are the only form of financial support available to German students. They are free of interest, repayment must begin within five years of the end of the maximum period of study designated for each course, and it has to be repaid fully in monthly instalments within 20 years. As with all student loan schemes, a respite can be given during periods of financial hardship, or if there is an acceptable reason, part of the loan can be remitted. Eligibility for loans is based partly on academic performance and partly on financial need. Academic eligibility is almost automatic for the first four semesters of a course but after that, students are required to submit evidence of their academic progress. Financial need is determined on the basis of family income but the regulations are stringent. The percentage of students receiving support has declined from 45 per cent in 1981 to 30 per cent in 1986. The average level of support amongst those students who took out loans in 1986 was DM 549 per month. In real terms there has been little change in the average level of support available since 1979. It is widely believed in Germany that this level of student support is discouraging young people from middle-income families from participating in higher education, and various proposals have been put forward for a more generous system of financial assistance for students. No great change seems likely, however, in the foreseeable future.

Japan also uses loans as the principal form of financial aid to students. Over three-quarters of the financial aid available to Japanese students is administered by the Japan Scholarship Foundation (JSF), and all of its programmes take the form of a loan rather than a grant. Of the 3 000 or so other organisations that offer some form of financial aid to students, two-thirds offer either loans only or a mixture of loan and grant. Most of this discussion is concerned with loans granted by the JSF. It offers two types of loan: Category I loans which are free of interest, and Category II loans which carry a relatively low rate of interest. These loans are available to both undergraduate and post-graduate students, but in contrast to other OECD countries, there is some tendency for the relatively favourable Category I loans to be concentrated on post-graduate students. Eligibility for a loan is determined largely on academic criteria, and the rate of loan depends on the type of institution attended and its distance from the student's home. In 1986, 35 per cent of graduate students were receiving Category I loans, compared with 11 per cent of undergraduates in four-year institutions and 4 per cent in two-year institutions.

Category II loans were introduced in Japan in 1984 to increase the opportunity of obtaining loans, particularly among undergraduate students. The conditions of eligibility are less restrictive than for Category I loans but the level of loan available is the same. At present they carry a 3 per cent rate of interest. In 1986, 3 per cent of undergraduate students in four-year colleges and 2 per cent of those in two-year institutions received Category II loans. The 1984 *Student Living Survey* indicated that in total, 21 per cent of full-time undergraduate students were receiving some form of financial assistance. However, the Japanese report claims there is reason to believe that this figure is biased upwards and that the actual figure is some percentage points lower.

Students have to apply for a loan before they enter higher education and also before each year of study. The final selection is decided by the student's academic department in the light of both his academic progress and financial need. The amount of the loan obtained does little more than cover tuition costs in public institutions and does not nearly meet the cost of fees in private institutions. In 1986, for example, the average annual amount of loan for students living at home covered one-third of the total costs of study plus living expenses, while the corresponding figure for those living away from home was just over one-quarter. The amount of the loan to students in private institutions has since 1980 failed to keep pace with increases in tuition costs in these institutions.

Despite these figures which appear unfavourable to students compared with other OECD countries, participation rates are higher than in any other OECD country except the United States, and this participation is remarkably evenly spread between the income groups.

> "The biennial *Student Living Survey* by the Ministry of Education – the official data regarding the relation between attendance and family income – indicates [that] ... the distribution of students by family income-class ... showed that the share of students from the lowest quintile class has *increased* since 1970. Moreover the same estimates indicated that the chances of attending a higher education institution are almost equal for all income groups except the highest. This appears to be the case not only with students in national institutions but also with those at private institutions. If these were in fact the case, equity in opportunity has been improved despite the increases in tuition levels, and family income is no longer the major factor determining attendance at higher education."

The Japanese report goes on to say, however, that these findings are controversial and that some experts have argued that the samples were probably accidentally biased. Other sources indicate that complete equality of opportunity in higher education has not yet been reached in Japan.

Indirect Financial Aid

Most countries offer some form of indirect financial assistance to students in the form of subsidising housing, travel and medical care. Often this is in effect little more than an economic pricing policy for a population that is relatively young, healthy, mobile, and undemanding in its accommodation needs. However, a number of European countries have made such indirect help a major form of publicly-funded financial assistance to students. These include France, Greece and Portugal.

In France, indirect financial aid has traditionally included university welfare services such as counselling and the provision of cultural activities, subsidised accommodation, social security and preventive medicine. However, there has been a steady shift towards direct rather than indirect aid during the 1980s. Excluding social security contributions, direct aid as a percentage of the total student aid budget has increased from 49 to 70 per cent between 1980 and 1989. This shift is felt to be more appropriate to a policy of targeting available aid on those students who genuinely need it. Indirect aid has the advantage that, in terms of the service it covers, it probably provides them more economically than if students were to buy them on the open market, though the reorganisation of student restaurant services on more market-oriented lines seems to have been generally welcomed in 1984. However, it is difficult to target indirect subsidies: once subsidised catering services are made available, for example, it is difficult to prevent them being available to all students, whether or not they really need them.

In Greece, indirect aid accounts for 80 per cent of the student aid budget and 10 per cent of the total higher education budget. The list of services provided consists largely of subsidised meals, but 6 per cent of the aid budget in Greece is devoted to the purchase of books for students, which is required by the Constitution. In Portugal also, over 80 per cent of student financial assistance is in the form of indirect aid. It consists mainly of subsidised meals in public institutions of higher education; there are also some subsidised university residences but only about 8 per cent of students live in them. The whole student aid budget amounts to 20 per cent of the total higher education budget.

Spain is another country which traditionally made use of subsidised meals and residences for students, but "their scope is now rather reduced and they service a limited number of students". Since 1984 there has been increased emphasis on the provision of direct aid in the form of scholarships. These are available for students of high academic achievement whose family circumstances would make it otherwise impossible for them to continue their studies. There are essentially two levels of grants: fee remission for students from families of modest means, and help with living expenses for those from very poor families. However, so far provision is limited: only a small percentage of students receive scholarships and "the system is not designed to make individual students financially independent".

Financial Assistance to Students in the United States

The Unites States is being considered separately because its student support schemes are so large and heterogeneous and unique in so many ways that it does not easily fit onto one of the three categories of support into which the other schemes have been grouped. There is a very significant component of loans but there are also grants – more favourable than in most other countries –, substantial subsidised student services and, unique to the United States amongst OECD countries, a large, organised work-study programme to enable students to find employment on campus while registered for full-time study. Another unique feature of the United States system is that it is delivered by the higher education systems, each of which has a student aid office to advise on the best package available and to administer the scheme. In the words of the United States report:

> "Student financial assistance has become big business in recent years. At the Federal government level in 1987-88 some nine billion dollars were appropriated for student aid programs authorized under the Higher Education Act, funds which in turn leveraged $15.6 billion in aid available to postsecondary students. All this makes student financial aid the largest single category of financial support provided by the Federal Government to higher education."

As in most other OECD countries, general financial assistance for college students started in the 1950s. In the United States the key event was the passage of the National Defense Education Act in 1958. This provided federal funds for a campus-based low-interest student loan scheme. The next development was the "college work-study programme" in 1964 which provided 80 per cent of the cost of salaries paid to financially deserving students for part-time employment on campus. The political appeal of this measure in a country with a long tradition of working one's way through college is obvious. In 1965 these two measures were consolidated into the Higher Education Act which remains the chief "umbrella" for federal student aid and institutional support programmes. Educational Opportunity Grants and government Guaranteed Student Loans were added to the list of financial opportunities available. Many students – especially the poorest – were eligible to receive aid from all four programmes. The concept of "packaging" had arrived: a method designed to provide the individual student with an optimal mix of grants, subsidised loans and subsidised part-time employment.

By the end of the 1960s many of the states were adding their own contributions to the package of measures available, and the 1970s saw "an explosive growth in means-tested federal student aid". The average amount of aid per student (in 1980 prices) increased from $1 450 to $1 920 between 1970 and 1980. The growth was mainly in federal aid which accounted for over 80 per cent of the student aid budget in 1980, compared with 73 per cent ten years earlier. The most important development of the 1970s was the establishment of a substantial grant programme, which came to be known as the Pell Grant Program, after the senator who steered the legislation through Congress. Eligibility for these grants is based on a formula that takes into account family income and assets, and the cost of attending a particular institution. By 1980, 2.9 million students were receiving Pell grant awards, i.e. one-third of all registered students. The Guaranteed Student Loan Program also grew very rapidly.

The growth of federal student aid has been less rapid in the 1980s, partly as a result of the reduction in the rate of growth in enrolments following the fall in the birth rate, and partly because "public sentiment had shifted toward more conservative views about government funding". In 1984-85, federal funds had fallen back to less than 77 per cent of the student aid budget.

In 1986 the United States Congress reauthorised the federal student aid programmes for a further five-year period but introduced some significant changes. All Guaranteed Student Loan borrowers are to be subject to a means test of eligibility. There are to be increased "matching" requirements for campus-based programme funds. There are to be new definitions of independent students to help avoid abuses. There is to be some eligibility for grants for less than half-time students, and there is to be some experimentation with income-contingent loans.

One of the main concerns in the United States in the past two years has been the rising annual costs associated with student loan defaults. In 1987-88, federal default payments were estimated to account for more than half the annual subsidy costs for the programme. There is considerable debate as to whether the defaults are occurring primarily because of the rapid rises in the costs of higher education or because the admissions practices of some institutions are causing students to enrol for courses on which they have little chance of being successful. A high proportion of the defaulters are students who have dropped out of their courses.

It is probable that the grant component of the student aid package will be increased but the subsidy to Guaranteed Student Loans reduced. Banks may be asked to share a small part of the risks from defaulting borrowers to encourage them to be more assiduous in pursuing offenders. It is also being suggested that incentives be built into the programmes to encourage students who make good academic progress. Some analysts are suggesting that it would make economic sense for students to receive grants during the early years of their courses and for the loan element to increase in the later years when the likelihood of drop-out is less and the student is nearer to successful course completion.

Post-graduate Students

Most of the schemes of financial support discussed so far are concentrated mainly on students at undergraduate level and below. Often, but not always, finance for post-graduate study is treated separately and little is known about it. There are three broad categories of financial assistance available: the same awards as for undergraduate students; special post-graduate scholarship schemes; or a salary paid either for research assistance or by an employer interested in the qualification the student is seeking.

One country where financial support for higher degree students overlaps to a significant extent with that available to students at lower levels is Japan, where 35 per cent of post-graduate students receive Japan Scholarship Foundation loans. Similarly, several of the United States programmes are available to graduate students as well as undergraduates. In both countries, however, there is in addition a wide range of special scholarships and fellowships for post-graduate students. In the United States these are often provided by the universities themselves, sometimes in order to be able to attract promising graduate students away from their competitors. In addition, there is a long tradition in the United States in having much more of the undergraduate teaching done by graduate instructors, which is in effect part apprenticeship and part work-study programme. This heterogeneity makes it impossible to make any estimates of how much is spent on post-graduate financial assistance.

Many European countries have special schemes of support for higher-level students. Often these are linked to arrangements for research training. In France there are special scholarships for students on a range of higher level: "third cycle" courses including the *diplôme d'études approfondies*, the *diplôme d'études supérieures spécialisées*, for those preparing for *l'agrégation* for secondary school teaching, and for those preparing for entry to certain public service examinations. Otherwise, there is a variety of research training grants.

In Germany there are organised schemes of support for graduates working for their doctorates. Most of these are individual students working on the preparation of a thesis, few being on organised courses. After a variety of changes in policy during the 1970s and early 1980s, the provision of scholarships for graduate students is now the responsibility of *Länder*, which are currently aiming to provide support for 2 200 students. In addition, eight major charitable foundations and many more smaller ones provide some support for graduate students. In 1984 about 1 600 doctorate students received financial support from them.

In Greece there are a very limited number of state studentships, often for study abroad by those who are expected to return to academic positions in Greek universities. In Spain it has been usual to treat post-graduate students as trainee researchers. Students prepared their individual theses often as part of a research team within the university or else simply as a spare-time activity while working elsewhere. Since 1983 there has been provision for a regular third cycle which provides both for post-graduate courses not leading to a doctorate as well as systematic research training for those undertaking doctorate degrees. However, implementation of this reform has been slow, partly for reasons of cost. In addition to this, there are a number of special publicly- and privately-funded, highly-competitive scholarships, often, as in Greece, for study in a foreign country. In general, post-graduate study in Spain is seen "not so much as a continuation of second cycle studies but rather as a first step in professional activity, normally within the university system itself".

The United Kingdom has a well-established system of post-graduate scholarships since the 1950s which was considerably expanded in the 1960s and 1970s. Awards for research students and some for those on professional courses are made by the five research councils. The scholarships are not means-tested but the amount of money available is age- and experience-related. However, the level of grant remains well below the earnings of equivalently qualified individuals and is thought by many observers to discourage graduates from undertaking academic post-graduate study. Like undergraduate awards, the post-graduate scholarships are available only to full-time students. As well as these government grants, there are a number of privately-funded scholarships, and in addition many post-graduate students, particularly part-time, receive financial support from their employers.

In general, where aid is in the form of indirect subsidy for meals and accommodation, post-graduate students have the same access to them as first-degree students.

Policy Issues

There are two main sets of policy issues: those concerned with the terms on which financial support to students is available, and those concerned with the terms on which any money borrowed is paid back.

The first set of questions asks whether there should be financial support and, if so, who should be eligible to receive it. Should all students receive support or should it depend on academic merit or family financial circumstances? Should all students at educational and training institutions qualify for financial support or should there be some form of designation of institutions? Once these have been decided, a second set of issues is the appropriate consideration of grants, repayable subsidised facilities, and tax remissions on educational expenditures.

Grants can be administered by the government, by another public agency, or by a non-governmental agency of the higher education institution. In the United States, student aid packages are administered by the institutions; in most other countries at present it is the responsibility of other public bodies. In the case of loans, all official schemes for students entail some form of government underwriting, otherwise there is little purpose in the scheme since students or their families would always be able to borrow from banks as private institutions. In several countries, loan schemes are administered by governmental or quasi-governmental agencies. However, in the United States and Finland, and in the scheme currently being proposed in the United Kingdom, loans are administered by the banking system. Apart from this, there are two major policy issues surrounding the repayment of loans: whether there should be any interest-rate subsidy other than the more favourable interest rates which are possible as a result of government guarantees; and the extent to which repayment should be related to the amount borrowed or on the ability to repay.

The policies of Member countries with respect to financial assistance to students are quite varied. Some convergence is, however, discernible. There has been a shift away from indirect aid towards more sharply focused direct income support. Some countries which make extensive use of loans are increasing the grant component in their student aid packages, largely because of the problems caused by students who are unable to pay off their debts. In other countries, especially the United Kingdom where students have hitherto depended entirely on grants, it is probable that the loan component will increase considerably during the next decade. In Australia, students' contributions are being sought through a levy on earnings.

There remain a few OECD countries where financial aid is available for only a minority of students, and for those who do receive support it covers only a part of the cost of their studies. These include Spain, Portugal, Greece and Japan, but in all of these the trend is towards greater student support.

Initially, student aid policies were focused to a large extent on the need to reduce wastage of talent resulting from competent young people from poor families being unable to continue their studies, and access to financial assistance was heavily dependent on academic merit. However, during the 1960s a new theme emerged – equality of opportunity – and eligibility became more dependent on assessment of financial need. In the 1980s, in some countries there were signs of the emergence of another new theme: the use of scholarships to help steer higher education in the direction of specific educational policy objectives. One example is the Danish clip-card system which has as one of its aims the encouragement of students to complete their courses within prescribed periods of time. Length of studies is a major policy issue in some other Scandinavian countries as well as in Germany. In all of them there is some debate about the extent to which student aid policy is responsible for the problem and whether it can be used as an incentive to students to complete their courses more quickly. Supporters of the relatively generous grants system in the United Kingdom claim that one of its main virtues is that it encourages students to complete courses within the three- or four-year period for which they are able to obtain a grant. It is feared by some that its replacement by loans will increase the effective length of courses as some students seek part-time work in order to reduce their dependence on loans. This may be compared with the situation in the United States where working one's way through college is part of the American folk culture and where work-study programmes are considered by some observers to be a positive virtue.

There has, however, been discussion in the United States of the possibilities of using aid policy to discourage drop-out from courses. This would represent a reversal of what was previously considered another virtue of the American system: the ability of students to drop in and out of courses in accordance with their own needs and interests. In part this is because a high proportion of former students who have difficulty in making loan repayments are those who left their courses prematurely. The problem of students who drop in and out of higher education courses highlight one of the inherent problems with loan systems. They are essentially based on the idea that students invest in their higher education during one period of time, and reap the financial rewards in a subsequent period during which they will be in a position to pay off any debts. If, however, periods of education recur from time to time, the administration of loan schemes becomes extremely complicated.

There are three aspects of student aid policy in the United States which might usefully be considered in other OECD countries: first, the concept of a package of aid with each student receiving support from several sources based on individual needs and interests rather than a mechanically-applied formula; second, the administration of this package by the higher education institutions rather than an external bureaucracy; third, subsidised work programmes on campus. One adacemic advantage of these is that they can be more carefully regulated than the casual work which many students undertake on their own initiative. Campus work-study programmes for students were considered unacceptable in most European countries during the period of high unemployment in the 1970s and 1980s.

If, as seems likely, the 1990s are a period of full employment, campus work schemes may well be a way of both helping to support students while they are studying and helping to provide some essential academic support services much less expensively than if bought on the open labour market. All of these schemes arose initially out of the particular position of the United States but all have some merits which might be suitably adapted to other countries as well.

There have been a few attempts to use student aid to orientate them towards particular types of study: in France, for example, some of the grants are used in this way, and in the United Kingdom there have been a small number of specially enhanced grants for students wishing to do engineering or train as mathematics or science teachers. However, such incentives appear to have little effect compared with the much greater influence of the variances in economic prospects generally which are open to graduates with different qualifications.

Another theme which is currently being considered in several countries is some form of more explicit income-contingent loans. The idea of repayment being based on ability to pay offers an interesting analogy to the concept of means-testing for non-repayable grants which is practised in almost all the grant schemes in operation. This would certainly help to reduce the problem of non-repayment, though some critics might say only by institutionalising it. The Australian proposal for repayment through tax debits once income rises to above-average levels is a particularly imaginative attempt to deal with this issue.

Summary

This chapter has outlined the wide variety of schemes of student financial support in the OECD Member countries taking part in this study. The main points to emerge are:

i) There were during the 1960s and 1970s massive increases in the financial support available to students.

ii) There was during the same period a shift away from academic merit towards financial need as the main criterion for student financial support.

iii) Initially, this support took the form of grants in many countries, but as the number of students increased there has been a growing tendency to replace grants with loans.

iv) In some countries where the amount of student borrowing is substantial, there are fears that this may be damaging both to participation rates and effectiveness of study.

v) There has been a shift away from indirect aid in the form of subsidised accommodation, meals, travel, medical aid, etc. towards more sharply-focused direct income support.

vi) In most countries, financial support for post-graduate students is on a different basis to that for undergraduates. Relatively little seems to be known about it, and it has rarely been the subject of policy discussion.

Chapter 4

FINANCE AND FUNCTIONS OF HIGHER EDUCATION INSTITUTIONS

The Importance of Funding Mechanisms

There have been innumerable studies of expenditure on higher education, of the costs of higher education and, more recently, of efficiency of resource utilisation in higher education. It is only during the second half of the 1980s that it has begun to be realised by educational policy-makers that the important link between these aspects of resource use is the mechanisms by which the higher institutions receive their funds. It has already been suggested in Chapter 1 that funding sources and mechanisms have a powerful influence on the way resources are used. In this chapter these ideas are explored further in the light of the country case study information in Chapters 2 and 3.

The trends of recent years in the countries taking part in this study show a convergence of funding mechanisms and procedures. In some cases there are moves away from resource allocation procedures which give substantial financial independence to individual institutions, and towards funding mechanisms that require greater accountability. For example, the private universities of Japan and the United States have accepted some degree of public accountability in return for increased funding from the public sector during the 1970s and 1980s. In other cases, for example French and Spanish universities and the British polytechnics which were previously closely regulated from outside, the move is in the other direction: they have been given increased financial autonomy.

In general, there has been a growing interest by many governments in the introduction of a larger element of market types of organisation and incentives. The move towards market mechanisms is taking two main forms: one is that public funding agencies are becoming increasingly selective, sometimes taking the form of "buying" services from higher education institutions; the other is that universities and colleges are being encouraged to seek an increasing proportion of their finance from non-traditional sources. Whether or not these market approaches meet all the aspirations of their protagonists remains to be seen. However, there can be little doubt that the ways in which higher education institutions receive their funds affect their incentive, and hence influence their internal organisational behaviour and the composition of the academic services they provide.

When resources are plentiful and the institutions of higher education receive general grants with few strings attached, either the collegial or political model outlined in Chapter 1 is likely to be dominant. There is a tendency for academic criteria and values to dominate internal resource allocation decisions. The internal dynamic of disciplines and subjects, rather than external economic or social pressures, determines which activities expand and which contract. There is usually a considerable amount of compromise in resource allocation decisions within institutions, since social relationships are more comfortable if the internal distribution is based on consensual decisions. Furthermore, if there is little restriction on the use of funds, it is relatively easy for members of an institution to use resources in ways that meet their own interests rather than those of their students or of a society at large. As the Japanese report points out in concluding a discussion of the increased public funding that was available for private universities in the 1970s, "the past behavior of the private institutions does appear to indicate that they have been not only determined by considerations of educational environment, but also strongly influenced by the interests of their members and other organisational factors".

Financial autonomy can, however, also bring benefits, and most of the country reports indicate increases in the degree of control that higher education institutions have over their own internal resource allocation. Any organisation which depends for its successful operation on high-level professional skills operates most effectively if there is a substantial measure of participation in its management procedures. Professional expertise is an essential component of resource allocation decisions in any activity where high levels of specialised knowledge are required, where ultimate benefits are long-term, and where the relationship between inputs and outputs is unclear. Furthermore, the basic economic truism that "there is no such thing as a free lunch" is most likely to be recognised by members of a university when it controls its own resources within a known budget. If the science department has an extra member of staff, there are less funds available for the humanities faculty; if the professor travels first class, fewer junior staff can travel at all, and so on. Institutional autonomy encourages participatory styles of management in which resource allocation decisions have an authority legitimised by consensus amongst those who will have to abide by the decisions. When a collegial model of resource allocation is working well, there are high academic standards and an ethos of professional integrity. However, if the college is operating less well, the protection of vested interests will become more evident. In particular, when resources are scarce, innovation and change become particularly difficult to achieve because no individual or group is willing to give up resources to permit the new activity to establish a foothold and become a new competitor.

As an earlier OECD report, *Universities under Scrutiny*, pointed out:

> "When growth is absent and money short, collegially-governed universities do not always find it easy to reallocate resources internally, particularly in ways that coincide with official priorities.... Buffer organisations set up to mediate relations between the universities and the government may become less effective." (OECD, Paris, 1987, p. 8).

External regulation of resource allocation stimulates a different set of responses. Good academic leadership, supported by centralised management structures and an effective bureaucracy can promote efficient resource use and rapid response to a changing environment. Bureaucratic procedures can protect the quality of education by ensuring that resources are adequate for the tasks which the operating units are required to perform and by monitoring the ways in which these resources are used. If, as is usually the case, the external agency is a public authority, it is likely to be influenced by perceived social, political or economic needs. On the other hand, it may not be well informed about the educational or scientific feasibility of the priorities it establishes. Immediate needs rather than long-term benefits tend to be dominant. *Universities under Scrutiny* claims that:

> "Governments and funding bodies react by distributing money in a more selective and targeted manner, but are not always in a position to calculate the long-term effects this may have on institutional response and the capacity of the academic system for self-regulation." (*op.cit.* p. 8).

Within the academic institutions there is likely to be a sense of alienation from the funding body, particularly if it tries to establish effective systems of external accountability. The funding agency is likely to be seen as a "black box" which, apparently arbitrarily, sometimes accepts claims for additional resources and sometimes does not. This seems to be the attitude, for example, of the managers of some Greek universities, who have in recent years put in bids for funds considerably in excess of what they can realistically expect to receive. However, it is felt that unless they put in the bids, they will receive even less. Resource users within institutions have little incentive to take much account of overall constraints. In general, claims for funds will be based on the expected *benefits* alone rather than a consideration also of the opportunity *costs* of other uses to which funds might be put.

The movement towards market approaches to higher education funding has four main motives: the first and most widespread is the hope that the private sector can be a source of supplementary funding and thus relieve governments of some of the cost burden. In the words of the Danish report: "...one of the objectives of adopting market solutions in the financing of education in Denmark is to relieve the public sector of part of the cost burden by raising supplementary funding from private industry and commerce".

A second reason for advocating increased private funding is that many of the benefits of higher education accrue to private individuals and to the enterprises that employ them. There is, therefore, a case on equity grounds for significant private financial contributions. However, private finance is not necessary for market mechanisms to operate. Government agencies can buy services from universities and colleges rather than make grants to them or otherwise subsidise their activities. This is the third form of market pressure. The reasoning behind the British government proposal to introduce a form of "contracting" as the main basis of higher education funding is the belief that quasi market incentives provide a more cost-effective way of allocating resources to institutions than either bureaucratic intervention or general grants. Finally, there is the view that competition for funds will encourage greater internal efficiency. More efficient institutions offering better value for money will flourish, while the less efficient will lose out. In general, under market arrangements there is an increase in the influence of purchasers of higher education services, so that the system will tend to be more responsive to their demands. This view in effect defines efficiency as the satisfaction of consumer wants at minimum costs.

Like the other funding models, market mechanisms stimulate their own set of responses: some desirable, some less so. Marketing strategies are probably best developed in the United States where most institutions have specialist staff concerned with the selling of the institution and with other forms of fund raising. The report from that country states that:

> "U.S. birthrates declined significantly all through the 1960s, resulting in a sharp decline in the numbers of available college-age students by the mid-80s. Nevertheless, postsecondary education enrollments have held reasonably steady at approximately 12.5 million. Creative marketing seems to have been the chief cause of this success; higher education institutions have worked arduously to attract more part-time, foreign and non-traditional students, in part by altering curricula to attract a new and different student clientele."

It has been estimated that the average marketing cost for each successfully enrolled freshman student in the United States in 1988-89 is approximately $800, which is about 7 per cent of the average recurrent institutional expenditure per full-time equivalent student. Allowing for an average course length of three years (a mixture of two-year and four-year institutions), this would suggest that rather more than 2 per cent of the income earned as a result of recruiting each student is devoted to persuading him or her to come in the first place. There are at present no similar performance indicators for other OECD countries. However, such intensive marketing brings problems, and the United States report reveals public and government concern about the quality of higher education.

One example of the effects of the introduction of a market approach was the response of many of the British universities to the imposition by the government of full-cost fees for foreign students in 1980. The rise in fees was followed by an immediate fall of 40 per cent in the number of foreign students. However, within months, several universities realised that the new arrangements were not only a threat to their institutional survival but also an opportunity for their financial salvation. Nearly all of them engaged in some form of active marketing in the countries sending the largest numbers of students to the United Kingdom. The extent of such marketing was very much less in the polytechnics, in large part because they were not able to control the use of any income they earned from fees. The situation changed dramatically when the regulations were changed, and now many polytechnics are as active as the universities in marketing their courses to students from overseas.

By 1985, 60 per cent of the universities had set up a committee to promote the recruitment of foreign students, and 65 per cent had some scheme of financial incentives to encourage individual departments to make the effort to recruit more students from other countries. The percentage of foreign applicants for undergraduate places who were accepted in the British universities increased from 24 per cent in 1979 to 36 per cent in 1986. Other changes included an increased concern with the welfare of foreign students and the introduction of a wide range of special courses aimed at particular categories – American undergraduates looking for a European cultural experience, continental European students wanting to study English language and literature, students from OPEC countries wanting research training to enable them to go back to good jobs in their own rapidly-expanding higher education systems, and students from developing countries with grants from government and intergovernmental agencies to help them acquire specific technical and vocational skills. In other words, universities segmented the market in order to increase their income.

However, there were also claims of irresponsible recruitment and the establishment of "ghetto courses" which had more to do with exploiting a financial opportunity than with providing students with a worthwhile British university experience. Once its students become paying customers, the university's attitude towards them changes – for better and for worse.

Market systems of finance for higher education institutions, no less than the two other approaches, have both advantages and disadvantages. Most of the anxieties expressed are concerns that too much emphasis on selling educational and research services endangers their quality in one way or another. *Universities under Scrutiny* sounds a warning about the dangers to university research of too heavy a reliance on market mechanisms:

> "A wish to maximise income from private sources in order to overcome short-run funding crises may, for example, tip the balance of research effort too much in the direction of applied work and routine testing. Too ready a willingness to adopt the scientific and technological 'flavour of the month' may inhibit ability to identify new and currently unfashionable possibilities." (*op.cit.*, p. 8).

Towards a Taxonomy of Funding Mechanisms

The funding of higher education institutions can, in virtually all OECD countries, be divided into two main parts: the core or basic funding linked more or less directly to their traditional main activities of providing formal degree-level courses and research; and supplementary funds for the many other activities that they undertake, including a good part of their research. Much of the interest in supplementary and alternative sources of funds and plural funding in general is concerned with ancillary activities, including applied research and development, courses for non-traditional students, consultancy, and the provision of various services such as the use of scientific equipment, sports and arts facilities. In virtually all OECD countries, higher education institutions are likely in the foreseeable future to continue to obtain a substantial part of their funds from national, provincial or state governments in the form of core finance for their basic teaching activities. However, in several countries there have been considerable changes in the criteria on which the core funds are made available, and other changes are the subject of active discussion.

Broadly, there are four different criteria on which core funding for higher education can be made available from public funds:

i) Incremental finance based on previous budgets;
ii) The application of formulae;
iii) Allowing the institutions to bid for funds on the basis of previously-agreed specifications;
iv) Subsidy of student fees.

As is usual with social phenomena, any attempt at a taxonomy of funding schemes is confused by the fact that in practice most schemes contain elements from more than one category. However, they are distinct conceptually, and although the boundaries are blurred they can be identified in practice.

Incremental Funding

Incremental funding is usually a characteristic of expanding systems. The basic assumption is that the institutions will continue to do what they are doing already, plus either some additional activities or more of the same. Attention is focused only on these incremental activities, and decisions about them may be made on the basis of formulae, *ad hoc* judgements or simple proportionate increases. There have been plenty of examples of all three during the past quarter-century. Few higher education systems are now in the fortunate position of being funded primarily on this incremental basis. If resources are not increasing, net increments must be either zero or negative. Resource allocation becomes a zero or negative sum game. This means that the new activities can be undertaken only if some old ones are discontinued or reduced in volume, which creates more difficult management problems for the institutions. External funding agencies in several countries have shown some impatience with the capacity of institutional managers to make such hard choices. This is one of the main reasons for the increased use of formulae and the growing interest in some form of contractual arrangements in several countries.

Formula Funding

The biggest change over the past decade in many countries has been the expansion and growing sophistication of the formulae used as criteria for core funding. This has by now largely replaced incremental budgeting as the main basis of institutional financial support in the majority of OECD countries. At its simplest, the formula is merely an overall average cost per student which the government pays the institution for each student enrolled or expected to be enrolled. However, the values of the weights in each element of the formula give powerful signals to the institutions about what it is most profitable for them to do. For example, a simple average cost per student will discourage them from providing expensive courses, since they will be paid just as much for putting on cheaper ones, provided that they can continue to recruit. Several countries have found that where course lengths are excessive, the provision of funds on a per-student basis provides little encouragement to the universities to persuade their students to complete their courses quickly. If, as is often the case, no distinction is made between full-time and part-time students, the institutions have an interest in retaining the nominal registration of as many students as possible, even if they rarely attend classes. In situations where a per-student subsidy to the university is accompanied by the availability of various indirect benefits to students, such as subsidised meals or travel or medical services, both students and their institutions have a vested interest in remaining registered indefinitely.

Most of the formulae now in use attempt to deal with at least some of these difficulties. While they remain based ultimately on estimates of required expenditure per student, the weights given to different categories of student vary considerably. Weights may be given for:

i) Intensity of study: those who are genuinely full-time being given larger weights than those whose study is in practice part-time;

ii) Subject of study: some subjects requiring more resources than others;

iii) Level of study: in the belief that the higher the level of study, the more resources are needed.

In several countries – for example Germany, the Netherlands, Denmark and Norway – formulae now limit the period for which funds may be claimed on behalf of any individual student: funds may be available to allow a student to repeat one year but no more. In a few countries – Finland, Denmark and the Netherlands for example – there are additions to the formula allocation when students complete their courses successfully, encouraging the university to take steps to ensure that students graduate as soon as possible.

Despite the increasing complexity of the formulae, most of those currently in use are based on assessments of actual institutional expenditures per student. However, new financial arrangements in the Netherlands take the concept of formula funding a stage further. There the government estimates the expenditure per student that would be needed on the basis of specific assumptions about timetabled hours per student, working hours per week by staff, staff salaries and equipment needs per student. However, as with most but by no means all systems of formula funding, a university is in principle able to spend the funds as it pleases once it has received them. The development of such task-based formulae is likely to be a feature of higher education funding in several other countries during the 1990s.

Contractual Funding

A financial mechanism that is growing in importance is the practice of financial agencies inviting higher education institutions to tender for funds to carry out specifically-designated activities. It has long been the practice in many OECD countries for professors to apply for research grants for particular purposes. The traditional practice was for the initiative to come from the researchers who would seek funds to carry out studies that they considered to be interesting or important. This primary research funding was often supplemented by relatively marginal research "contracts" from government departments or private employers in which the research sponsor specified the research to be done.

The first step towards "tendering" for mainstream research in several countries came in the 1970s when research funding agencies began to indicate in advance, to a much greater extent than previously, their own research priorities by inviting researchers in universities to submit bids that met these priorities. The next stage was when severe stringency in core funding began to appear, in the late 1970s in many countries, and universities began much more actively to seek finance from outside their usual funding sources. There was also a growth of other non-traditional activities, such as recurrent education, which were often funded by means of specific grants from agencies other than the established education authorities. The advantage for these alternative funders was that the core funding of the higher education institutions was already being met by the education authorities, so that the specific funding had only to meet any additional costs incurred. As a result, they were often able to have their research done or their courses provided at less than full cost. The stage is now being reached in several OECD countries where the core funding agencies are beginning to see the value of using some form of tendering process for the mainstream teaching and research activities. Both Denmark and the Netherlands have moved a long way in this direction and following the passage of the 1988 Education Reform Act, the British government has announced its intention of requiring universities to carry out specific teaching activities.

In France also, a policy of contractual funding is beginning to be put into operation. Each institution has to define its policy, and a four-year contract covering the whole of its activities is agreed with the ministry. There is no intention of putting universities in competition with each other: the objective is to increase the autonomy of the universities while at the same time permitting the State to carry out more effectively its responsibilities of regulating and co-ordinating the university system.

Conceptually, tendering has something in common with formula funding. Formulae are in effect specifications of what the funding agencies want, and the institutions are able to obtain funds to the extent that they meet these specifications. There are two main differences. The first is that formulae are usually applied retrospectively: for example, institutions are usually paid on the basis of last year's student numbers, whereas the contractual assumptions of bidding mean that it is future commitments that are important. The second arises because it is normal in formula-funding schemes for the grant, once it has been agreed, to be paid over to the institution in the form as it pleases. Under contracting arrangements the sponsor normally takes steps to ensure that its funds are used in accordance with the agreement. The institution receiving the funds has discretion only with respect to any "overhead" element that has been previously agreed. This, together with the potential "leverage" effects of specific grants mentioned in the previous paragraph, means that the issue of "overheads" is of fundamental importance in any major funding system which involves bidding to undertake specific activities.

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The difference between such systems of "tendering" and the "bureaucratic" systems of finance outlined in Chapter 1 is that the external agency remains a funding body and not an administrative agency. It does not intervene in the management of the higher education institution; it merely ensures that contracts are fulfilled to its satisfaction. The institution is free to accept or reject contracts and to carry them out however it likes, provided that it meets the previously-agreed specifications.

There are three main forms of contracting: the first, and most closely similar to formula funding, is for the funding agency to announce its specifications, and funds are available for any higher education institution able to meet these specifications. The second is when the funding agency issues a fairly general specification which covers many of the main teaching and possibly research activities, but makes funds available only up to a predetermined limit. The third is when the funding body issues precise specifications for each separate activity, including limits on the amount of funds available, so that institutions have to compete with each other if they wish to undertake that activity.

The first scheme is the most similar to formula funding. The only real differences are the monitoring of "contracts" and the use of planned future commitments rather than past performance indicators in arriving at the level of payment to be made. From the viewpoint of some governments, the main difficulty with such arrangements is that they are essentially open-ended: the government stands ready to provide funds to any institution that is able to meet the specifications. Such arrangements have been widely used in the United States, but they are not likely to be popular with governments which put high priority on restraining public expenditure within previously-determined limits.

Under the second form of contract funding, the funding agency decides its own targets in terms of student numbers or research. The institutions are then invited to bid for certain parts of this programme and the agency agrees a programme with each university, the implementation of which is monitored. Any arrangements under which institutions bid for a predetermined sum of money encourages competition between institutions. Some see this as an advantage, others a disadvantage. On the plus side, it is claimed that competition encourages academic institutions to offer value for money within the terms of the "contract" and to be active in assessing their own strengths and weaknesses. On the minus side, competition may lead to loss of quality as institutions try to reduce their unit costs in order to increase their chance of success.

The third form of funding by contract occurs when each activity is financed separately. This can lead to severe competition between institutions. One important effect of increasing the number of activities that receive separate budgets is that it increases the power of departments and other basic operating units at the expense of the institution as a whole. Whether or not this is a desirable aim is an issue that goes right to the heart of the idea of what a university should and realistically can be. Piecemeal bidding is at present the current practice for many of the supplementary activities of higher education institutions and must inevitably remain so. That is in effect part of the definition of supplementary funds. It seems likely that such sources will continue to increase in most countries as a percentage of total higher education income though, as has been shown, the current percentage varies widely between institutions and between countries. It is also probable that an increasing proportion of the work of universities will come to be regarded as supplementary activities in this sense. For example, there is a marked trend in several countries to make a sharper distinction between the funding of research and teaching, and for each research programme to receive a separate grant. However, to move from this situation to one in which all or most of the core funding is provided in this way would mark a very major change. The complexity both of drawing up the contracts and of monitoring them would be considerable.

Tuition Fees

Some of the biggest differences between OECD Member countries are in the area of student fees. Discussion of the issue is often confused with the debate about financial aid to students, but it is a different issue and overlaps only to the extent that fee subsidy may be part of the financial aid package available to students in countries where fees are paid. There are broadly five possibilities:

- No fees;
- Fees for some courses but not for others;
- Fees are charged but they cover only a part of the cost;
- Fees are charged which cover most of the cost of courses;
- Fees are charged but financial support is available from public funds to help students pay them.

Most countries in Continental Europe have a long tradition of charging no or very low fees for students on "initial courses". However, students attending courses of continuing or recurrent education, or their employers, are required to pay fees usually covering the full cost. At the other extreme, Japan and the United States rely on tuition fees to a significant extent, especially in the private universities. In the United States these fee payments are heavily subsidised out of public funds but in Japan the level of subsidy is low. In the United Kingdom, fees covering a small proportion of costs are charged but are reimbursed for most British undergraduate students. In 1989 the government announced its intention of raising this proportion to 25 per cent of the full cost of undergraduate study, but they will continue to be subsidised out of public funds. However, there is a growing realisation in several countries that one of the few ways of increasing the funds available for higher education is by charging more to students or their families.

The debate about fees has four distinct elements:

i) The effect on the total resources available to higher education;
ii) The implications for the autonomy and efficiency of higher education institutions;
iii) The effect on the power of students as consumers to influence the orientation of higher education;
iv) Differences between fees of students on initial courses and those paid for recurrent education.

The first is based on the proposition that since graduates and their employers obtain substantial economic benefits from higher education, they should in principle be willing to pay for it just as they would for any other private investment, either immediately or out of future income. State subsidy, according to this view, should be confined to correcting imperfections in the market, as a result for example of external benefits, i.e. the benefits to the whole community that result from having some of its members highly educated. State subsidy of some sort might also be justified to counterbalance lack of information by some households about the potential economic benefits. It is argued that such a hybrid system permits the total resources available to higher education to be more than they would be if finance came from the public or private sector alone. There certainly is evidence that the mixed systems of Japan and the United States result in much higher levels of enrolment than in European countries. It must not be forgotten, however, that in both countries there is a very substantial system of public and private higher education supplements to make good what are seen as qualitative or quantitative deficiencies in the public system.

The argument is carried a stage further in countries where payment of fees is required from all students attending public higher education institutions. A recent manifestation is the Australian proposal that former students with above-average earnings should incur a tax debit for every year of post-secondary study to cover 20 per cent of the costs. Thus, graduates would pay for a part of their studies retrospectively, and those whose incomes did not reach the average earnings of manual workers would pay nothing.

Second, advocates of the funding of academic institutions through fees believe that it helps to protect their autonomy. The argument is that fee income is free income in the sense that it is not subject to government contracts or formulae. The universities can spend it as they please without the detailed accountability that is a growing feature of most of institutional subsidy. Many of the student aid schemes in the United States have this effect. They are essentially a means of transferring federal funds to higher education institutions in a country where the Constitution prohibits direct federal involvement with education. Since the basis of this argument is benefit to higher education through the autonomy of the institutions, it matters very little whether the fees are in fact actually paid by the students out of their own resources or whether the students merely act as a channel for the transfer of public funds to the universities.

The arguments made in some countries for the finance of higher education through vouchers issued to students are in important respects similar. The voucher is essentially an agreement by the public authorities to pay fees up to a certain amount when it is submitted by the higher education institution which has provided the education. However, the main case made by proponents of vouchers is the increased power they put in the hands of students as consumers of higher education. Such ideas underlie in part the Danish "clip card" system. The card is simply a book of vouchers, each entitling the student to one month of study. But it is very flexible in that, within broad limits, students are able to use their entitlements when it is most convenient to them.

Third, the view that students are essentially consumers also raises fundamental issues about the nature of higher education. The traditional view is that students are apprentices learning the academic trade from those who are already masters of it. They are disciples and must submit to those who know the discipline better than they do. This is a very different interpretation from that which claims that academics are sellers of knowledge and that it is entirely a matter for consumers with command over resources to decide what knowledge is worth having. Clearly, both positions have some validity. The first model depends ultimately on the professional integrity of the providers of higher education, and this has not always prevailed over professional self-interest. On the other hand, consumerism in higher education can easily result in superficiality and an excessive preoccupation with short-term benefits. The practical policy issue is to achieve the right balance for any particular higher education activity at any point in time. At present there seems to be a widespread view in OECD countries that consumers should have more influence, though not all agree that student fees or vouchers are the best way of bringing this about.

The fourth issue in the fees debate does not raise such fundamental issues, but it is of immense practical importance as continuing and recurrent higher education becomes more widespread. It rises out of the discrepancy in many countries between the students registered for first-degree courses and those doing various kinds of recurrent or continuing education including, often, post-graduate courses. The former pay no fees at all; the latter are often required to pay fees that cover the full costs of their courses. The difference arises partly because recurrent education started to expand during a period of public expenditure restraint and it was not politically opportune to seek substantial additional public funds for this purpose. There is also, however, a more general point of principle that unless there is a constraint on the amount of education which any individual can claim out of public funds, there could be large disparities between those who want to continue their education indefinitely and those who leave school at the earliest opportunity. There are proposals in many countries for a big expansion of recurrent education, but it seems unlikely that this will occur to any significant extent without a comprehensive reappraisal of the way costs are shared in the funding of higher education. Vouchers and clip cards may provide part of the answer.

Critique of Recent Developments in Institutional Funding

One of the major discoveries of the 1980s in several OECD countries has been that higher education institutions, like other economic enterprises, respond to financial incentives. It is not yet clear whether in comparison with administrative regulation, control by financial incentive improves the efficiency of resource use by the institutions. Institutional managers have been criticised both in countries where they have had almost complete financial independence and in those where most financial decisions are taken outside the institution. Financial autonomy combined with specific financial incentives is supposed to combat the institutional selfishness of the one and the lack of motivation of the other. As has been shown in Chapter 2, changes in the mechanisms for funding higher education institutions are of two types: modification of core funding, and developments in the sources and methods of supplementary funding.

It is core funding, the basic general subsidies which account for between 50 to 90 per cent of the income of the universities, polytechnics and colleges, that has been subject to particular restraint during the 1980s in many countries, and it is restraint on core funding that explains the paradox of universities in some countries complaining about financial stringency, while in fact their total income has increased. However, even more important than the size of the core funds has been the changes in the mechanisms by which they are allocated to institutions in several countries. These changes have on the one hand been intended to increase the financial autonomy of the institutions and, on the other, to focus resources more sharply on national priorities. Many governments now see financial incentives as a more effective way of influencing the pattern of activities in higher education institutions than administrative intervention.

The efficiency and effectiveness of institutional management is a matter of concern in most countries, but there are differences of opinion about the best way of achieving improvements. Some governments believe that increased financial autonomy will make institutional managers more financially responsible and encourage them to seek funds from other sources. There is some evidence to support this view, in that universities in countries such as Great Britain and the United States which have a long tradition of financial autonomy earn more supplementary funding than universities in countries where all expenditures are controlled from outside the institution. In particular, institutions which are required to surrender any supplementary income to a government agency have no incentive to make any effort to earn such income. The effect is similar if, as in Spain until 1987, the funding of institutions is adjusted to take account of any income earned by the institution outside its general subsidy. Conversely, if, as is proposed in Australia, universities receive some form of matching grant from the government for any income they obtain from other sources, there is an increased incentive for them to be active in seeking such funds.

It is these considerations that have led several countries to accompany moves towards greater financial independence for their higher education institutions by increased selectivity in funding. Resources are provided for specific programmes rather than for the general academic work of the institution. For example, funding on the basis of students completing courses rather than the numbers registered is a feature of the new Higher Education Development Act in Finland. In Denmark the budget is divided into activity areas, and norms are established in relation both to the number of students and to the number of those graduating from each activity, in order to discourage excessive length of studies which in Denmark, as in Finland and Germany, is one of the major obstacles to cost-effectiveness in higher education.

Another innovative feature of resource allocation in Denmark is that the basic allocation into activity areas is now supplemented by a "pool system" which enables the ministry to support selective new initiatives against a background of financial cut-backs. The pool consists at present of about 1 per cent of total recurrent expenditure which is held back from the initial formula-based allocation and which can be claimed by the institutions as grants for new initiatives connected with reorganisation, or it can "be used as a buffer against unexpected institutional cut-backs". Broadly, the pool system is a device that enables the government to spread its basic formulae (and, if necessary, to impose an across-the-board cut in expenditure), while at the same time having funds which can be used selectively to bring about changes which the government desires. This is similar in some ways to the methods used by the British University Grants Committee (UGC) in its 1985-86 allocation to universities. In the British case, however, the degree of selectivity was greater and it was not concerned primarily with funding innovation. The overall budget of the university system as a whole was split into a teaching and a research component. Approximately 60 per cent was allocated to universities more or less evenly in proportion to their student numbers, and the remaining 40 per cent was distributed selectively on the basis of the research record of each department in each university. In addition, the UGC retained a small amount of funds for special initiatives such as continuing education and the encouragement of engineering and technology. Another similar arrangement is the Netherlands system of conditional funding of research.

One problem for governments concerned to bring about change in higher education, as in other areas of public policy, is that the outcome may not always be the one intended, or there may be unwelcome side effects. For example, the Japanese concern about the use made of the current costs subsidy to private institutions has already been mentioned.

The most vulnerable aspect of higher education to changes in funding arrangements is quality. Any form of "contractual" funding must almost inevitably be linked to some form of quality assessment: this may be done by the universities themselves acting collectively, or it may be imposed by the funding agency. A closely-linked danger is that competition will subvert much that is of value in higher education. According to this view, higher education does not perform best in an atmosphere of competition for immediate financial rewards. Much of the best basic research and some of the most worthwhile teaching is carried out by unworldly academics who need sufficient resources to do their work but who are unlikely to perform well in the competitive world of glossy prospectuses, public relations presentations, and adherence to detailed budgets. Co-operation has previously been the hallmark of the academic world. Certainly, there has been competition for prestige, for scientific recognition and even on occasion for resources, but it has not often been competition for economic survival. Many of the country reports express concern that much that is worthwhile will be lost if universities have to show clear evidence of immediate value for money in all their activities.

There is also concern about some of the effects of the increased contribution of supplementary funding from external sources. The authors of the Danish report comment that "one of the side effects of the new sources of financing may be that, because less hampered by narrow rules, they may attract the most dynamic and creative researchers of the institutions. This may take place at the expense of the fundamental activity of teaching". The French report expresses a concern that the subjects which are already treated as priority in the regular funding, such as technology and business management, receive most of the external funding also. The author of the Spanish report is worried about the possibility of contract work distorting the fundamental academic purposes of the universities. There is a danger that relatively lucrative contracts will "direct research towards those fields which have the easiest access to subsidies to the detriment of more fundamental or less commercialised fields".

The Japanese report, in considering the proposals that the national universities should be accorded financial and administrative autonomy as "special juristic persons" to enable them more easily to attract outside funding, expresses the rather different fear that "such reforms would create a substantial disparity between the large and prestigious institutions on the one hand, and the smaller and regional ones on the other".

In the United States and the United Kingdom there are worries about another aspect of contract funding of research by private enterprises and government departments. This is that the research sponsors in claiming the rights to use the results of the research, may inhibit the publication of new findings and thus endanger traditional academic freedoms. Even more important, by impeding the free flow of information, they may actually slow down the progress of scientific discovery. Concern has also been expressed in the United Kingdom that the new forms of selective resource allocation and bidding for contracts can result in excessive amounts of academic staff time being devoted to preparing proposals and accounting for the way in which funds are used. This too could divert universities, polytechnics and colleges away from their main academic purposes.

There is also the problem, as far as research is concerned, that many major discoveries are made almost accidentally and that the opportunity for such happy accidents is very much reduced if all research funding is focused on specific applied issues. However, it is also the case that most modern science is expensive and that even serendipity is unlikely unless the right equipment and materials are available.

A solution to at least some of these problems lies in recognition of the importance of all funding agencies paying the full costs of any service they buy from higher education, including an adequate allowance for overhead costs. Academic institutions funded under arrangements such as those being discussed here are non-profit seeking, but in other essential respects commercial, enterprises. If they were private-sector companies they would include an element of profit for their owners. The university analogue to profits (out of which the owners finance future investment) is the activities which they consider to be important but which others do not wish to pay for. It is important in any market-oriented funding system for contracts to contain an appropriate component analogous to profits, to fund activities of the university's own choosing and to permit it to build up the intellectual capital for future developments.

Macro-economic Considerations

There are three main aspects of resource allocation to higher education which concern governments: the total amount of resources, responsibility for the establishment of priorities within higher education, and the efficient management of resources within institutions. In many OECD countries all three of these considerations appear to be pointing in the direction of plural funding and devolution of financial responsibility to individual universities and colleges. Such pluralism and devolution is not, however, unproblematic and there are substantial differences between Member countries in the extent to which they have so far been prepared to move in these directions. This section considers the argument for and against the trend towards what is in effect a market approach to the provision of higher education.

Determining the Total Level of Expenditure

International comparisons provide little help in deciding the appropriate level of public expenditure on higher education. Even amongst the limited number of OECD countries taking part in this study, the proportion of national income accounted for by public expenditure on higher education has varied between 0.5 and 2.5 per cent over the past 20 years. There are no obvious patterns over time, and no clear relationship between public expenditure and levels of enrolment. Comparisons of expenditure per student are particularly difficult but, even allowing for very large margins of error, there are clearly big differences between Member countries. It is tempting to associate such differences with those in the quality of higher education, but there are serious conceptual problems in assessing the relationship between level of expenditure per student and quality of education provided. It *is* possible to have high levels of participation and low costs at the expense of the quality of the education offered to the majority of the students or the research undertaken. However, high participation rates and relatively low costs may be achieved likewise through efficient resource use. There are also big differences between Member countries in the extent to which they rely on private finance. In Japan nearly half of the total funding comes from the families of students. In the United States a third of the income of higher education institutions comes from student fees, and a further third from employers and donors other than the students and their families. (It must be remembered, however, that student fees are heavily subsidised in the United States.) Both Japan and the United States have participation rates higher than all European countries, although Japan has one of the lowest and the United States the highest proportion of national income devoted to higher education, and in most European countries nearly all institutional expenditure is provided out of public funds.

There are even bigger and more paradoxical differences in the contribution made from public funds to the living expenses of students while they are studying. Students are most generously treated in Great Britain which has a relatively low participation rate in formal higher education, whereas in Japan with very high enrolment levels, students receive virtually nothing from public funds, except some loan assistance with tuition fees for a minority.

These examples illustrate a well-known problem of international comparisons of higher education. It is extremely difficult to ensure that like is being compared with like. Higher education systems are networks of enterprises encompassing a wide variety of teaching and research, and activities supporting them such as student recruitment and welfare. They also include a range of other public service and commercial activities such as consultancy and the sale of marketable services. Decisions about which activities to include within "higher education" are to some extent arbitrary and determined by historical and political circumstances within individual countries. Since many higher education institutions are autonomous enterprises, there are often differences in the way many of these items are treated even within a single country.

A fundamental question for policy-makers in determining the level of funding for higher education is whether it is more appropriate to decide the total resources for the whole sector and then to divide this amongst the various subsidiary activities; or to allocate resources to each of the constituents separately so that the total expenditure on higher education is merely the sum of the separate components. One of the central claims of this report is that, to an increasing extent, diversity and variety are the most important characteristics of higher education at the end of the twentieth century. While the concept of global funding for higher education as a whole may have been appropriate in circumstances where universities and colleges were engaged in a relatively narrow range of activities evaluated on the basis of similar criteria, it is now almost impossible to conceive of a higher education budget except in terms of separate budget heads and different allocation criteria for every main programme item. These programmes may each be financed in different ways and, in the case of public expenditure, from several government departments.

One possible approach to the problem of deciding on appropriate levels of funding for teaching is the calculation of private and social "rates of return" to expenditure on higher education. This has received considerable attention in the academic literature but has generally been treated with scepticism by government educational planners. Rate of return calculations compare differences in lifetime earnings between graduates and non-graduates with the cost of obtaining qualifications. The strength of the approach is that both the economic benefits and the costs are brought into a single planning model. Most other approaches to planning higher education provision either focus exclusively on the benefits and ignore the costs of obtaining them; or they concentrate on reducing the costs without considering explicitly whether some even more important benefits may be lost.

As far as the returns to private individuals are concerned, the approach has some technical problems: for example, the returns estimated today reflect the experiences of those who graduated some years ago, and there are statistical difficulties in deciding how much of an individual's extra earnings is due to additional education and how much to greater inherent ability. However, it is conceptually sound as an approach to the analysis of private demand for higher education: greater subsequent earnings are a legitimate reason for seeking higher education and for incurring costs while doing so. Their use as a criterion for public funding, however, is beset by two much more serious conceptual problems: one is that the additional earnings of graduates may not really reflect higher net productivity; they may simply result from an irrational preference for graduates by employers. This gives rise to "credentialism" or "the diploma disease". The second is that even if graduates do have higher productivity, they are rewarded for this in higher earnings and therefore there is no obvious reason why the rest of the community should be expected to meet their study costs. This is one basis of the claim that students should pay for their own studies and that support for them should be in the form of loans rather than grants.

Nevertheless, the ideas which underlie rate of return calculations have a place in the financial planning of higher education. Many of the objections to the approach arise from its attempted use to compare educational expenditures with other private and social investments, or for comparing the economic value of different levels of education, for example primary and higher education. However, if, as is being suggested, the main issue in higher education planning is not about how much higher education in total, but rather whether one or other category should be expanded relatively to others, then comparisons of rates of return are appropriate. There have been remarkably few attempts to compare the rates of return of different branches of study at the same level; for example, qualifications from different types of higher education institutions, or graduates from different subject specialisations. Claims are often made, for example, about the need to expand engineering education, with little consideration of the fact that it often costs more than three times as much to produce an engineering graduate as a history graduate. For a proper investment appraisal, this means that the economic benefits derived from one engineering graduate should be compared with those from three history graduates.

There is a rapidly-growing interest in the use of performance indicators in most Member countries. At the national level these certainly should include regular monitoring of the costs and economic benefits derived from different categories of higher education. Regular monitoring of the costs of producing graduates at each level and in each of the main subject specialisations, and of changes in the relative earnings of each, at least in the early years of their working lives, can be of considerable value in indicating which branches it is most worthwhile to expand and which are currently showing a tendency to oversupply in relation to the needs of the labour market and the costs of training. This is not to claim that labour market needs and costs are the only factors that governments should take into account in deciding their higher education expenditure, but they are major considerations for both governments and students.

However, the best way of acknowledging the essential pluralism of higher education is to encourage pluralism in funding it. This is the direction being taken in most OECD countries, but some have gone much further than others. There can be pluralism within public funding of higher education as well as between public and private sources. The conceptual basis for pluralism *within* public sector funding is that even within governments, different public interests have dissimilar ideas about priorities in higher education. It is reasonable for these priorities to be supported by finance. For example, in the United Kingdom it was only when the Department of Education and Science decided to abandon the subsidy to overseas students that the Foreign Office discovered that the country's foreign relations might be severely damaged by this change. A considerable scholarship programme was therefore initiated by this Department. In most OECD countries the Ministry of Health has a substantial involvement in the planning and financing of medical education; Ministries of Industry and Employment are both discovering an interest in higher education; other public agencies with an interest in higher education and in the funding of some parts of it include the armed services and the police. All have different interests and are therefore likely to use different resource allocation criteria.

The determination of criteria for funding research is even more difficult than for teaching, and this is one reason why university research in most OECD countries has always had multiple funding sources. The research university has a great variety of facilities and considerable expertise amongst its academic and technical staff that it is able to sell to public and private agencies. An important issue for some universities is to avoid a situation where commercial exploitation has a seriously damaging effect on the central functions of the university.

One of the main advantages of plural funding is that it recognises the multiple functions and activities of a modern higher education system. No single set of priorities is dominant and no single criterion determines the level of resources available. It is possible also that this results in a higher overall level of funding, since some activities will be supported that would not be deemed worthwhile by a single funding agency. The university or college which has a variety of funding sources, as well as being more genuinely autonomous than one which is dependent on a single funding body, is also likely to be more active in seeking support.

There are some disadvantages of plural funding: the most serious is that an institution with plural sources of funding, in a system where higher education nevertheless depends mainly on a single funding source, may have its central functions distorted by the subsidiary providers of funds. If the main sources of funds are fully utilised in maintaining basic activities, then the only source of finance for innovation will be the subsidiary providers. This may well give them an influence on the patterns of the development of higher education disproportionate to the amount of resources they actually contribute. One solution is to insist that all activities are fully costed, but in an enterprise in which the main economic input is the time and expertise of an academic staff and where many of the outputs are intangible, it is often very difficult to relate specific costs to specific outputs. Indeed, it is in some respects conceptually impossible to make a correct assessment of the costs of using basic facilities such as laboratories, libraries and computers where these are shared amongst many different users. At a practical level, however, where there are no other indications to the contrary (for example, many research projects make little use of the university registry) it is not difficult to allocate overhead charges roughly in proportion to the amount of staff time devoted to each activity.

Another possible disadvantage is that, in a climate of financial cuts, some institutions and some subjects are more vulnerable if there are many funding sources. If a university is entirely dependent on a government agency, it is not autonomous but the agency does have some responsibility for the university. If there are a large number of agencies each providing a small amount of funds, all of them may reduce their contributions without any feeling of responsibility for the higher education system as a whole. Similarly, if there is no agency with overall responsibility, subjects may be more vulnerable because no agency will have any particular interest in funding them. Strictly speaking, this is not an argument against plural funding but about the criteria used by governments, funding agencies and institutions. If governments wish to protect "vulnerable subjects", they should create funding agencies with particular responsibilities for them. If institutions wish to protect vulnerable subjects to maintain the academic integrity of the institution, they should ensure that part of the overhead income earned from their successful activities is used to protect those that do not have this opportunity. Planning and co-ordination are certainly much more difficult in a system where there are many sources of funds. The trend is towards a greater diversification of funding sources and this seems likely to continue, however, in most OECD counties.

Financial Autonomy and the Establishment of Priorities within the Higher Education Sector

The second big issue in the finance of higher education concerns the means by which priorities are established within the sector. There are broadly four groups who might claim the right to determine priorities: academics whose legitimacy comes from their professional expertise; the administration of higher education institutions which can claim to reflect a broader academic picture; governments and other public authorities representing the interests of society as a whole; and students and other consumers of academic services. This section considers some of the issues arising, in particular how the claims of academics and their institutions can be reconciled with those of governments and consumers.

The right of academics to teach and to do research according to their own professional judgement, free from political or religious constraint, is now largely accepted in all OECD countries. However, the nature of this right and its legitimate boundaries are not entirely uncontroversial. No freedom is absolute. In their teaching role, academics have the responsibility to teach what they believe to be true and to be able to support their views with evidence or reasoned argument. It is recognised that if this responsibility is ignored, others have the right to intervene but there is no agreement about who has this right. The classical view of the collegial university is that such issues are principally a matter for the discipline or area of study to which the academic belongs. A teacher who no longer subscribes to the rules of evidence or to the body of knowledge that constitutes a discipline, can no longer claim the right to teach it. A problem with this approach is that it is the failure of the traditional university to respond quickly enough to what others see as changing external circumstances that is at the heart of many of the charges that have been made against it in recent years. Both external regulation by political and bureaucratic authorities, and greater emphasis on market forces, have been justified in terms of the failure of the collegial university to respond adequately to new needs – in particular, its tendency to treat any declining activity as a vulnerable area needing to be protected.

When applied more widely to research and scholarship, the freedom of academic staff is also problematic: academic freedom is an element of the good society. The free expression of intellectual opinion is intrinsically valuable; and the right to conduct research in any area, subject only to the constraints of professional academic judgement, is both an end in itself and probably the most effective way of making new discoveries. There are difficulties, however. Claims for academic freedom give little guidance when it conflicts with other intrinsically desirable ends. Some research cannot be justified on ethical grounds, whatever the possible ultimate benefits, and it is not always clear that professional judgement of peers is adequate to decide what these ethical constraints should be. Are such decisions, essentially political, to be taken by the elected representatives of society as a whole? On the other hand, would it not be intolerable if decisions about what research to undertake and how to undertake it were dependent on political pressure groups with little informed knowledge in the area concerned? Such issues arise mainly, though not entirely, because higher education is paid for largely out of public funds. The issue of accountability for public funds, and the location of the right to determine the limits of their use, cannot be absent from any discussion of the professional freedom of those who use the funds.

Some elements of the debate are more concerned with means than ends. Truth and knowledge are pursued most effectively by individual scholars who are subject to no constraints other than the rules of evidence and the laws of logic. However, some organisation of knowledge is necessary: scientific progress would be slow if every scientist worked as an individual. A free market in research ideas may provide opportunities for new insights; it is equally true that disciplined research teams, in which every member undertakes specific predetermined tasks, increase the chances of obtaining the evidence on which new insights must be based. It is not clear, however, who can legitimately claim the right to organise scientific activity or to establish research priorities. As with teaching, it might be individual academics: systems of funding, which do not separate research and teaching and which allocate resources unselectively to all university teachers, are based on this principle. It might be academics acting collectively in their institutions or as members of a discipline. The former occurs when a university receives unselective research grants and allocates them selectively to individuals or groups within the institution; the latter, when funds are allocated by research agencies composed largely of fellow scientists. It might be various groups in the wider society of whom two are particularly important: politicians, representing those who elect them and pay taxes; and employers, representing the pressures of the market place and the demands of consumers. Professional expertise gives scientists and scholars the right to a special voice in the establishment of research priorities but there are limits to this privileged position. Sometimes a distinction can be made between means and ends, between the establishment of research priorities and their implementation. In the latter, the voice of the professional must be dominant; in the former the professional voice must be only one among many. The wishes of both electors and consumers must also be taken into account.

However, none of these broad categories is homogeneous. Even elected governments are often put there by a minority of those qualified to vote; and government itself is a network of different interests reflected broadly in the responsibilities of ministries and departments within ministries. Consumers have a wide variety of tastes and preferences, and scientists and scholars all have their own particular discipline or area of interest to protect.

The previous section attempted to derive criteria for the overall amount of public funding for higher education, and concluded that there could be no universal guiding principle and that the best results are likely when there is a variety of funding sources and several different types and levels of decision-making. Consideration of issues of freedom and responsibility in academic life points in the same direction. Higher education, more possibly than any other activity except religion, is concerned with long-term benefits. There are, at any one time, intrinsic disagreements both about policy objectives and about the best way of achieving agreed objectives. In both their teaching and research roles, universities have the responsibility, and should have the means, to stand aloof from the whims of current fashion and to be concerned with underlying realities. But at the same time they should not, and should not be in a position to, ignore entirely what is happening in the world outside their walls.

In a plural society there are not only substantial differences of opinion about objectives and the means of achieving them, there are also uncertainties about the outcomes of most teaching and research. Gross errors are more likely to be avoided, and the occasional brilliant insight made, when many varieties of flower are blooming, and errors or misjudgements in one place are compensated by breakthroughs in others. Such issues of principle have to be translated into financial practice. Many different sources of funding and many different criteria for the disbursement of funds may complicate the lives of university managements, but it is the surest guarantee of the capacity of higher education institutions to perform their proper long-term functions.

The Management of Institutions

During the quarter-century up to 1975, when higher education had high political priority and resources were plentiful, issues of overall funding and the establishment of priorities were debated mainly as matters of academic principle, not as a political or financial reality. Institutions were able to pursue a variety of objectives, whatever the funding sources and whatever the external and internal administrative arrangements for their disbursement. Mistakes in one year could be rectified out of the incremental resources available in the following year. During the past decade, however, in many countries resource constraints have highlighted the importance of rational institutional planning in which priorities are established and strategies to meet the priorities developed and implemented.

In several countries financial restraint is being accompanied by measures to devolve many resource allocation responsibilities to the institutions. The main reasons are that it will encourage greater efficiency and will provide incentives for universities and colleges to be more assiduous in seeking additional sources of funds. A view sometimes put forward by opponents is that financial devolution makes it easier for governments to impose financial cuts without their needing to be concerned in detail about the consequences. In the bureaucratic model of funding, a government or agency wishing to reduce expenditure must also decide which activities are to be reduced and by how much. Those whose vested interests are affected by the cuts are able to lobby the government directly about the likely damage, and to rally political support for the reversal of specific decisions. Where there is an intermediate level of decision-making between the basic decisions about funding and their effects on specific activities or individuals, the intermediate authority can claim that it has no power over the total resources, whereas the government can disclaim responsibility for the repercussions of its expenditure decisions. In extreme cases the government may believe that the intermediate authority is deliberately allocating resources in ways that will cause most public concern. This is, however, a risky strategy. It can encourage a government to retrieve powers it has previously devolved. It was claimed in the OECD study of *Policies for Higher Education in the 1980s*, published in 1983, that financial stringency would inevitably mean more central control because only in that way would governments be able to control patterns of spending. At that time, when financial stringency was still in its fairly early stages, this appeared to be the trend in several Member countries.

The greater the financial autonomy of higher education institutions, the more important it is for them to have efficient decision-making structures and the administrative capability to undertake these responsibilities. The reality of institutional management is quite different under the three basic models of collegial, bureaucratic and market systems of organisation. The administration of a university in which the main financial decisions are concerned with allocating a predetermined sum according to academic priorities is very different from one in which most of the important decisions concerned with, for example, the employment of staff, are taken outside the institution. Neither of these has much in common with the market-oriented university in which income is earned directly by the activities of the basic operating units and the individual members of staff within them. In this last case, one of the main preoccupations of the managers must be to establish a system of incentives that will encourage all members of the operating units to respond to changing market opportunities in a manner that simultaneously contributes to the income of the university and maintains its academic integrity. So far, the marketing of higher education has been a major preoccupation only in the United States, but European countries are beginning to realise the importance both of promoting the services they can offer and of tailoring their range of products to meet the needs of their customers.

The management of higher education institutions has been a major concern of both institutons and governments for several years: the success of the OECD programme on Institutional Management in Higher Education is one illustration of this interest. The new financial mechanisms will increase the importance of such training and information-exchange programmes. A major concern of the 1990s will be the provision of training programmes for academic and administrative staff that will increase their capacity to take competent resource allocation decisions which enhance the academic life of their institutions.

Within institutions another key management issue of the 1990s will be to decide how much financial devolution there should be to departments and other basic operating units. The issues are almost exactly similar to those which have been discussed in connection with devolution to institutions, although the emphasis may be different. The arguments in favour of more departmental autonomy are, first, that this will encourage a greater sense of responsibility in the use of resources, since opportunity costs are more easily appreciated in small decision-making units; second, that departmental loyalty is more likely to encourage individual members to seek outside funds for the good of the unit as a whole; third, that comparisons of performance indicators between fairly independently managed departments can help central administrators judge the relative efficiency with which different activities are being carried out. The arguments against departmental financial autonomy are, first, that the smaller the cost centre, the less likely it is there will be staff with the necessary expertise to take informed resource allocation decisions; second, that if too much time in academic departments is spent on management issues, this will conflict with the performance of their central academic tasks; and third, that departmental enthusiasm should not be encouraged to supplant loyalty to the institution as a whole, because much teaching and research needs to be interdisciplinary if the full benefits are to be obtained. A practical problem is that decisions about academic staff salaries cannot be fully delegated to small departments because they constitute such a large proportion of total costs that relatively minor variations in individual salaries can have a major effect on the finance of a relatively small cost centre. In several countries the main decisions about academic staff establishments are still taken outside otherwise autonomous universities for similar reasons.

Greater financial autonomy for the institutions and for the lower-level operating units within them is an almost inevitable result of any significant shift towards market criteria in higher education funding. In order to respond quickly to changing market circumstances, it is essential for universities and departments to be able to accept contracts, to appoint staff quickly and to be able to incur other expenditures to fulfil contractual commitments. Financial procedures which were established to regulate academic activities in institutions largely funded by general grants from central government are rarely appropriate for rapid adaptation to changing market conditions. However, this can cause severe strains within institutions. The coexistence of staff permanently employed on the basis of traditional academic criteria, and of those whose employment contracts are subject to the greater flexibility appropriate for market conditions, invite invidious comparisons. Tensions that could be contained when most academic staff expected to find secure, permanent employment in due course, are likely to become uncontrollable as more and more staff find that their lifetime careers consist of tenuous short-term contracts. Nearly all OECD countries now have these two categories of established and unestablished academic staff, and unestablished staff are growing in relation to those who have secure long-term employment. The more secure the established staff, the less secure are those who are unestablished, because the whole burden of any adjustment to changing demands must be borne by them. The problem will be particularly acute in that established staff are normally those employed primarily to teach students on traditional courses attended mainly by academically well-prepared school-leavers – and this is just the clientele that is least likely to grow in the early 1990s. The employment conditions of academics is less likely to be a major management issue of the 1990s as institutions diversify their activities and become more financially independent.

Chapter 5

PROSPECTS AND POLICIES

A Summary of the Main Findings

It is difficult to make predictions about the future of higher education, or recommendations about policies for its funding that are applicable to all OECD countries. There is a great variety of approaches to funding, organisation and administration at both system-wide and institutional levels. Nearly every conceivable reform has been tried in at least one country, and improvements that are appropriate in some countries may be ruled out in others for historical, cultural or political reasons. This final chapter reviews the recent national experiences as a basis for an attempt to identify new and proposed developments that may have wider application. It concludes by presenting a number of funding issues that are likely to be at the centre of the higher education policy debate for at least a decade, although the way they are dealt with may differ between countries.

Chapter 1 outlines the development of higher education finance associated with the great expansion of higher education during the 1960s and early 1970s, and with the much slower growth of the later 1970s and early 1980s in most OECD countries. It draws attention to the growing diversity of higher education systems as they increase in size, and suggests that funding mechanisms that are effective for relatively small homogeneous systems are not necessarily appropriate for mass higher education. There are also differences between funding arrangements that are satisfactory when overall public funds are expanding but which are unable to cope when growth gives way to a steady state or a decline in resources. Five basic models of finance are introduced: property ownership, general grants, line-by-line budgets, plural government funding, and sale of academic services. These are related to four models of academic organisation: collegial, political, bureaucratic and market. Earlier OECD studies are cited to suggest that the pressures of the 1980s are leading to a shift towards market forms of organisation in several Member countries.

Chapter 2 reviews developments in institutional finance in 12 countries during the 1970s and 1980s. It distinguishes between private control of higher education institutions and their private financing, and between core funding and supplementary sources of income of these institutions. In most OECD countries there was some increased financial stringency in the public funding of higher education between the early 1970s and the mid-1980s. In several countries this stringency has been relaxed in the last few years, partly as a result of the development of new sources of funds. Only Finland and France report the likelihood of increased public funding for higher education in the foreseeable future.

In Japan and the Unites States, private institutions constitute a substantial part of the total provision of higher education. An important difference between the two countries, however, is that in the United States, average expenditure per student in private universities is 60 per cent higher than in the public institutions, whereas in Japan it is 50 per cent lower. In some European countries there remain a few universities controlled by the church; for the most part, however, the trend up to the early 1980s in these countries was for private universities to be gradually absorbed into the public sector as they became more and more dependent on public funds. There has been some move in this direction in Japan through the "current costs subsidy" to private universities, although this still constitutes only a small proportion of the total income of these universities.

In all countries except Spain there is a substantial non-university sector of higher education, and much of the expansion since the 1970s has been in this sector. In some countries it now accounts for more than half the total number of students enrolled. For the most part, these institutions focus more on professional preparation and less on research than do the universities, and they are funded less generously.

In several countries there has been a shift towards more sharply-focused targeting of central core funding of institutions out of public funds. This has often been accompanied by increased financial and administrative autonomy for the institutions.

In some countries there has been discussion of the possibility of charging fees to students as a way of contributing towards the cost of higher education. However, at present only in Japan, the Netherlands, Spain, the United Kingdom and the United States do fees constitute a significant percentage of the total income of higher education institutions. In the United Kingdom, fees for nearly all home and undergraduate students are paid out of public funds; and in the United States also, fee payments are heavily subsidised. In most countries, fees are charged for "continuing" or "recurrent" education, usually at full cost. There is growing interest in most countries in enabling and encouraging higher education institutions to seek supplementary sources of funding. This process has gone furthest in the United States where "marketing" of higher education is big business.

In Chapter 3 there is a similar review of financial aid to students. It explores the equity and efficiency rationale for student aid, and considers the choice that has to be made between direct and indirect aid, the conditions of eligibility of students, the choice of courses and institutions, of grants and loans, and the arrangements for repayment of loans. In most OECD countries there were massive increases in financial support to students during the 1960s and 1970s. There was a shift away from academic merit towards financial need as the main criterion for student support. Initially, aid in many countries took the form of grants, but as the number of students increased there has been a growing tendency to replace grants with loans. The Scandinavian countries were the first to make extensive use of loans as the main basis of institutional aid to students. In some countries where the amount of student borrowing is substantial, there are fears that this may be damaging both to participation rates and effectiveness of study. There has been a shift away from indirect aid in the form of subsidised accommodation, meals, travel, and medical aid, towards more sharply-focused direct income support. The main conclusion is that forms of support which are appropriate for a relatively small and homogeneous higher education education system are not necessarily best suited for a much larger, diversified system. In most countries, financial support for post-graduate students is on a different basis from that for undergraduates. Relatively little has been published about the subject and it has rarely been a topic of serious policy discussion.

The Emergence of Market Approaches to Funding

Chapter 4 develops the concepts of Chapter 1 in the light of experiences in OECD countries. The main conclusions are concerned with the growing interest in finding additional sources of funding, and in focusing public funds more explicitly on what governments perceive to be national needs, while preserving and often enhancing the academic autonomy of universities and other higher education institutions.

Changes in institutional funding which are either under way or being discussed in several Member countries include:

- Increased sophistication of the formulae used in determining the allocations to each institution;
- Greater financial autonomy for the institutions once they have received their funds;
- Increased proportion of income from student fees;
- Sharper distinction between funding of research and of teaching;
- Increased proportion of public funding to be "bid for" by the institutions;
- Larger share of income from contracts with employers and commercial organisations.

In very many countries, the most important part of these changes in terms of the amount of resources involved is the increasing use and greater sophistication of formula funding. Recent reforms of funding mechanisms in Denmark and the Netherlands are good examples of the potential use of formulae to provide sophisticated incentive systems for the universities. Both schemes are too new to have been properly evaluated, but they represent ways of reconciling legitimate government concern to determine major priorities in the use of public funds, and the equally legitimate demands of the academic institutions for sufficient autonomy to carry out their teaching and research functions according to academic and professional judgements. In both countries the formulae encourage institutions to ensure that students complete their courses within the prescribed period. Differential weightings in the formulae may be used to decide the expansion or contraction of particular subjects or modes of study. Various weights may also be given to students from different types of institution. One outcome of the more sophisticated use of formulae is that different institutions are likely to be paid the same amount for performing the same function.

The use of formulae of this type is facilitated by the expansion of computerised management models which can absorb large amounts of information and predict the likely outcome of various assumptions and sets of weighting coefficients. One problem in applying such formulae, referred to in both the Netherlands and Danish reports, is that the complexity may distort the signals which the formulae are intended to convey. In developing formula-based models it is essential to remember that the main purpose is that the institutions have appropriate resources to carry out the tasks they are expected to perform and that the signals conveyed by the formulae reflect the real priorities. It is, however, not always worthwhile to increase the complexity of a formula if a desired result is not being achieved.

Increased financial autonomy for higher education institutions has several implications for their internal management: most of the country reports indicate increases in the degree of control that these institutions have over their internal resource allocation. Many now have considerable freedom to decide their staffing levels within budget constraints, though there remain a few countries where academic staff appointments are determined by a central or local government. Another widespread development is changes in administrative regulations to allow universities, and usually other institutions as well, to retain earnings from research, consultancy or the provision of full-cost courses. It is being recognised that unless this is possible, there is little incentive for academic staff to make the necessary effort to attract income from what are described in some countries as "third-party sources". One issue which arises as institutions are given more autonomy is how much of this financial freedom should be passed down to lower organisational units – faculties or departments. There are conflicting views about this: one is that a university is more likely to mobilise its resources if there is considerable power at the centre. The opposite view is that, just as institutions would show initiative if they were able to retain any income they earned, the same is true of departments. The solution must be to find internal resource allocation formulae which take account of both components. As a rule, the more refined the external funding mechanism, the more sophisticated the internal allocation machinery needs to be.

In general, there is a growing interest by many governments in the introduction of a larger element of market types of organisation and of incentives in all higher education institutions. Changes in core funding have on the one hand been intended to increase the financial autonomy of the institutions, and on the other to focus resources more sharply on national priorities. Governments are tending to see financial incentives as a more effective way of influencing the pattern of activities in higher education institutions than administrative intervention. Public funding agencies are becoming more selective, in several countries they are beginning to see themselves as "buying" services from institutions which are also being encouraged to seek an increasing proportion of their finance from other government sources.

In addition to the changes in core funding, many governments believe that the private sector can relieve governments of some of the cost burden, and that since many of the benefits of higher education accrue to graduates and their employers, they should be prepared to meet some of the costs. Some also take the view that competition for funds will encourage greater managerial efficiency within the institutions.

There is, however, some concern about possible damaging effects of these changes: one is that activities funded by new sources of finance may attract the most dynamic and creative researchers at the expense of more fundamental teaching and research staff. There is also a fear that subjects such as technology and business management will be excessively favoured, and that plural funding will increase disparities between the large and prestigious institutions and those that are smaller and less well established. Some institutions and certain curriculum subjects may be ignored if there are many funding sources. A higher education institution which is dependent on a government agency may not be independent, but the agency does have some responsibility for the integrity of the institution as a whole. If there are a large number of agencies each providing a small amount of funds, none of them need feel any such responsibility.

There is some anxiety that research sponsors may inhibit the publication of new discoveries which, as well as inhibiting academic freedom, may, by impeding the free flow of information, slow down the progress of scientific discovery. Concern has also been expressed that new forms of selective resource allocation and bidding for contracts can result in an excessive amount of academic staff time being devoted to preparing proposals and to accounting for the way in which funds are used. Most of these express the concern that too much emphasis on selling educational and research services endangers their quality, and that competition threatens both academic freedom and many intrinsically valuable but unsaleable activities. A "market" system of funding must be accompanied by some form of quality assessment, either by the higher education institutions collectively or by governments or funding agencies.

There are other possible disadvantages: if the major sources of funds are fully utilised in maintaining basic activities, then the only source of finance for innovation will be the subsidiary providers. This may give them an influence on the patterns of the development of higher education disproportionate to the amount of resources they actually contribute.

An underlying issue of principle is the means by which priorities are established within higher education. Higher education, more possibly than any other activity except religion, is concerned with long-term benefits. There are, at any one time, intrinsic disagreements both about policy objectives and about the best way of achieving agreed aims. In both their teaching and research roles, universities have the responsibility, and should have the means, to stand aloof from the whims of current fashion and to be concerned with underlying realities. At the same time, they should not ignore what is happening in the world outside their walls. Many different sources of funding and criteria for the disbursement of funds are the best guarantee of the capacity of higher education institutions to perform their proper long-term functions. It is important, however, that both the institutions and their financial sponsors recognise the importance of paying the full cost of any services they are buying, including that of adequate overhead charges. All contracts should contain an appropriate component, analogous to profits, to fund activities of the university's own choosing and to help secure the intellectual capital for future developments.

The greater the financial autonomy of higher education institutions, the more important it is for them to have efficient decision-making structures as well as the administrative capability to undertake these responsibilities. Within institutions, a key management issue will be to decide how much financial devolution there should be to departments and other basic operating programmes for academic and administrative staff that will increase their capacity to take competent resource allocation decisions.

In order to respond quickly and flexibly to changing market circumstances, it is essential for universities and departments to be able to accept contracts, to appoint staff quickly and to incur other expenditures to fulfil contractual commitments. Financial procedures which were established to regulate academic activities in institutions largely funded by central government grants are not always appropriate for rapid adaptation to changing market conditions. In particular, the employment conditions of academic staff is likely to be a major management issue of the 1990s as institutions diversify their activities and become more financially independent. The coexistence of staff permanently employed on the basis of traditional academic criteria, and those whose employment contracts are subject to the greater flexibility appropriate for market conditions, creates particular tensions. Nearly all Member countries now have these two categories of established and unestablished academic staff, with the latter growing in relation to those who have secure long-term employment.

Demand for Higher Education in the 1990s

The dominant influence on the higher education systems of most OECD countries during much of the 1990s will be the decline in the number of school-leavers. Whether or not this will mean fewer students will depend on the responses of governments and higher education institutions. The aim of this section is to consider in general terms what these responses are likely to be and what they ought to be with respect to the funding of institutions and the provision of financial support to students.

There will be some governments, and at least some members of all governments, who will see the fall in the number of traditional clientele as an opportunity to extend educational opportunities and to improve the quality of provision through increased expenditure per student. There is good reason to believe that young people now reaching the age of entry to higher education are more likely to want to continue their studies than those from earlier generations. A much greater proportion of families now have at least one member who has experience of higher education, and there is evidence that young persons from such families have a more than average propensity to enter higher education. However, a powerful view in most OECD countries, and in particular the attitude of many ministers of finance, is that the period of potentially declining demand is an opportunity to reduce expenditure commitments. This argument will be strengthened by the fact that at the same time as the school-leaving population is falling, the proportion of people above normal working age will be increasing rapidly in most countries. There will be a growing demand both for pension benefits and for medical and other services required by older citizens.

The attraction of reduced expenditure on higher education will, however, be tempered by fears of shortages of highly-qualified entrants to the workforce. If the economies of OECD countries are to continue to grow at a healthy rate, employers' demands for well-qualified workers will increase. Furthermore, as economic growth comes to depend more and more on high-technology goods and services, the standard of education of all workers from the most highly qualified to the least skilled will need to improve. Demographic trends will also lead to specific areas of qualified manpower shortage unless steps are taken to counteract them. One example is medical care, especially care for elderly people; another is school teaching, since the low number of births in the late 1960s and early 1970s have been replaced by larger birth cohorts.

As far as governments are concerned, therefore, there will be two opposing pressures: to divert some public expenditure away from higher education towards those activities that cater for an ageing population, and conversely to meet the growing social demand and to increase both teaching and research outputs so as to avoid bottlenecks to continued economic growth and social improvement. The desire for public expenditure restraint, accompanied by increased output, points to policies that will encourage efficiency, that will attract funding from sources other than government, that will be selective in their impact on different higher education activities and that will maintain appropriate standards in increasingly diversified systems.

Diversity and Selectivity

Apart from demography, other fundamental influences on the higher education policies of most governments will be the improvement of access and the wish to remain in the forefront of science and technology. In both, finance is likely to be much more selective than previously. As far as access is concerned, the lessons to which Martin Trow first drew attention in the 1970s have been learned: a mass higher education system must be a system of great diversity ("Problems in the Transition from Elite to Mass Higher Education", in *Policies for Higher Education, General Report*, OECD, Paris, 1974). No single approach to the provision of higher education, and indeed no binary approach in which the system is divided merely into universities proper and "other institutions", will be appropriate for all the people who are potentially able to benefit from some part of it. There must be a wide variety of subjects to study, levels of study, forms of study, modes of study and costs of study. Academic standards must be appropriate to the students and the courses. This is not to say that the new categories of students should receive an inferior education. It does not mean that the academic criteria which are appropriate for judging traditional courses are not the only relevant considerations. Fitness for purpose is the yardstick against which higher education institutions must be evaluated when funding agencies are allocating resources.

Expansion and diversification pose particular problems for the funding of research. The needs of research are very different from those of teaching in a mass higher education system. One result of a variety of purposes and criteria in teaching institutions is that research cannot perform the same function in all of them. Much of the scientific research requires expensive scientific equipment and there are undoubted benefits from a concentration of effort. Moreover, there are growing doubts about the nature of the links between teaching and research. Until very recently, it was widely claimed that teaching and research, at least in traditional universities, were complementary and inextricably linked together. In recent years, however, the distinctiveness of the two functions and the possible conflicts between them have received more attention. There is a growing realisation that not all students benefit from close association with research scientists. For many it is advantageous to have the opportunity of working alongside professional practitioners and to be taught by expert communicators and popularisers rather than by the research workers themselves. For researchers, regular teaching commitments may often be a distraction. As science becomes more and more specialised, the knowledge gap between scientists at the frontiers of knowledge and the majority of students widens. While the individual university teacher, working alone or with a small team, can continue to make advances in some areas, it is increasingly recognised that modern equipment and frequent rapid communication between scientists is essential for major scientific progress. Hence the comparative advantage of specialised research groups.

These conditions certainly do not mean that research has no place in the university of the future. What they do imply is that the assumptions on which funds are allocated are likely to continue to distinguish more and more sharply between the research function and the teaching function, and that large-scale scientific research will tend to be concentrated in relatively few institutions. It is important, however, to ensure that research selectivity does not result in excessive emphasis on short-term performance indicators, and also that adequate provision is made for serendipitous research, some of which will bring substantial returns as it has done in the past. Unfortunately, it is not possible to give precise guidance as to what constitutes "excessive emphasis" or "adequate provision".

Financial Support for Students

In the past, before the expansion of the 1960s, student aid policies were focused on the need to reduce wastage of talent, and access to financial assistance was heavily dependent on academic merit. During the 1960s, eligibility became much more dependent on assessment of financial need. Now another new theme is emerging: the use of student financial aid to help steer higher education in the direction of specific policy objectives.

There is a considerable variety of forms of financial support to students in Member countries, even greater than the diversity of arrangements for funding the institutions. There are examples of students paying the full cost of their higher education themselves, and there are cases where the whole cost, including the living expenses of students, is paid out of public funds. The only generalisation that can be made is that there is no simple relationship between the proportion of the costs of higher education paid by students or their families and the rates of participation in higher education.

Financial aid to students inevitably raises the demand for higher education above what it would otherwise be. This may be particularly relevant at a time of prospective labour shortages when high salaries and high levels of employment in the youth labour market might otherwise discourage many young people from investing their time in obtaining higher-level qualifications. Aid is likely to be less effective in countries where the main reasons for non-participation are cultural or social rather than economic.

It seems likely that by the end of the century all countries will have some form of financial support for students that includes both a grant and a loan component. There will be little general interest-rate subsidy for all students, but governments will continue to guarantee repayments and to subsidise those whose economic circumstances make it unreasonable to make the full repayment. There will continue to be some form of indirect aid through subsidisation of student services in most countries, but the experience in several appears to be that this is neither an efficient nor an equitable way of providing the main financial support to students.

There are three aspects of student aid policy in the United States which might usefully be considered in other OECD countries: first, there is the concept of each student receiving a package of support based on his or her individual needs. The second is the idea that students should be counselled about the optimal package for them and that it should be administered by the higher education institutions rather than an external bureaucracy. The third is the idea of subsidised campus work programmes.

There is an interest in some countries in increasing the proportion of institutional costs paid by students. Usually this is argued on the grounds that it boosts the total funds available for higher education and that it is equitable because of the high private investment value of a university degree. However, more recently another argument has begun to assume some prominence: that it is advantageous for the universities if a significant share of their income comes in the form of student fees. In other words, the emphasis is not on the benefits of fee *payment* by students: rather, it is on the presumed benefits of fee *income* by the institutions. It is argued that their independence is increased and that they become more assiduous in marketing their services to potential students. People who advocate fees for this reason are therefore not concerned if the fees themselves are subsidised out of public funds, and such suggestions are often linked to proposals for the establishment of a system of educational entitlements or "vouchers".

It is unlikely in most OECD countries that, in future, students on conventional higher education courses will be required to pay a substantially larger part of the tuition costs of their education themselves. In countries where students and their families do pay a significant share of the costs, the trend is in fact in the other direction. Some increases are probable in countries where students pay nothing at all, but the Australian proposal that graduates pay retrospectively about 20 per cent of the cost of their courses seems to be the appropriate upper limit in many countries. This is also near to the percentage proposed in Spain.

A more difficult issue is the finance of non-conventional courses and those beyond first-degree level, as these come to form a larger part of the activities of higher education institutions. Employers will have a part to play here. Many, though by no means all, of these courses are vocationally oriented to meet specific employment needs in updating skills or providing retraining for those whose present range of expertise has been made redundant by technological, economic or social change. Where the new skills offered are specific to the needs of particular employers, or small groups of employers, it is appropriate that they should meet most of the costs. In many cases, as at present, individual employers will continue to make specific arrangements with the relevant institutions. However, public funds have a part to play in three ways:

i) To provide incentives that enable smaller employers to take advantage of the training opportunities available;

ii) To ensure that public sector agencies themselves act as enlightened employers, both in releasing employees for continuing education and in offering fair financial terms to the universities;

iii) To provide finance to help workers obtain new skills when those they have previously acquired have become redundant through technological or economic change.

A recent phenomenon in several countries that has implications for student financial support is the appearance of subsidy schemes for young people other than students in higher education. Usually these schemes are linked to training; some have the effect of subsidising the employment of young persons when they first enter the labour market. The growth of such programmes, together with the increased emphasis on cost recovery in higher education, may mean in some countries that those students, who used to be at an advantage in the amount of public money spent on them, will come instead to be at a serious disadvantage, raising the danger of damaging effects on the development of high-level skills in those economies over the long term. A common obstacle to the resolution of such inconsistencies is that various government departments are involved and each has a different set of priorities.

There need to be co-ordinated schemes of income support for young persons during the period of transition between the completion of compulsory education and their establishment in the permanent labour force. Discussion of such schemes during the past two decades has been coloured by the problem of youth unemployment. The 1990s are likely to be a period of youth shortage, with employers and higher education institutions competing for school-leavers, so that distortions in the incentive structure will have particularly damaging economic effects. The absence of serious overall youth unemployment will mean that the establishment of a comprehensive framework for youth support need not be prohibitively expensive.

Some Policy Questions

There is a growing diversity of higher education in most OECD countries and increasing pluralism of funding mechanisms that support it. The process has gone much further in some countries than in others. In no country has it reached a stage where it is no longer possible to identify a principal source of core funding for major institutions. All OECD governments will have to confront the question of how far they want the trend towards pluralism to go. In some it is a matter of whether private universities will be allowed to exist; in others, of deciding whether public universities will be allowed to retain any supplementary income they earn; in yet others it is a question of whether public funds will reward institutions that are successful in earning income from other sources, as opposed to compensating them if they are unsuccessful; and in another group of countries the main issue is tax incentives to those who pay fees, or who fund research, or make gifts to higher education institutions. In all countries, ensuring adequate resources for new initiatives is a major concern.

A related set of issues is the place of fees in the funding of institutions. Again, the detailed questions are different in each country, though the issues are similar. In some it is a question of whether fees should be charged at all. In many more there are questions about the payment of fees for recurrent education, especially in circumstances such as training undertaken in order to be able to move to new areas of employment, where it is not realistic to expect employers to pay the fees. Another issue is the extent to which fees should be subsidised out of public funds, and if so, whether this should be done through tax concessions or by reimbursement of fees to students from low-income families. A debate that is emerging in some countries is that of the advantages and the disadvantages of subsidisation of fees through an educational entitlement or voucher scheme. Institutions are likely to be more responsive to student needs if they depend directly on student custom for their income. On the other hand, there is the concern that fees, even if subsidised, may discourage some students, which will conflict with policies to improve access.

There is a range of issues concerned with financial aid to students. Although each country has its own system, the basic questions are similar here also. The most important are the balance between grants and loans, the criteria of eligibility and the terms of loan repayments. The rationale for financial support to post-graduate students has rarely been confronted, and that for recurrent education hardly ever.

Access policies will generate many issues for the public finance of higher education. Many of the new categories of students will have special needs; they will be less well qualified than traditional students; and they will often come from disadvantaged social groups. How can the encouragement of a wider clientele be reconciled with restraint in public expenditure on higher education?

The finance of research also gives rise to questions that vary in detail but which arise from similar principles. The fundamental issue is the relationship between the funding of research and teaching. In broad terms, there has been a shift from financing research jointly with teaching, to funding it separately. Even for governments that accept this principle, there are questions about how far it should go. Should funding be entirely separate, with each activity bearing its full costs including overheads? Should all higher education institutions be funded to undertake research, or only some of them? What should be the criteria of selection in research and teaching?

There is a parallel group of issues concerned with resource allocation *within* higher education institutions. What financial responsibilities should be delegated to academic departments and research centres? What management structures are appropriate for institutions that have multiple funding sources, and what training is needed to improve middle management? One of the most difficult issues will be the management of staff in institutions with both a large group of established staff insulated from external financial pressures, and a smaller but rapidly-growing group whose employment depends directly on their university's success in attracting supplementary funds.

Finally, there are two tasks which the OECD or a similar international agency might wish to undertake: one is a comparative review of financial support schemes for young people, leading to recommendations about ways in which they might be brought together into coherent programmes giving consistent signals about national priorities. The other is the development of comparable statistics on higher education funding which take into account both the great variety of activities undertaken by higher education institutions and the many sources of funds available to them. The statistics which are currently available, including those assembled especially for this study, give only a very broad approximation of the relative position of different countries.

Conclusion

The changing patterns of finance which have been outlined here are often seen within higher education as a threat – and there certainly are risks. However, they also offer opportunities in what might well be a period of stagnation if higher education institutions confine themselves to their traditional clientele of recent school-leavers. Well-managed institutions that are responsive to national needs will find resources from a wide variety of sources to carry out their fundamental academic functions of scholarship, social criticism and the creation of new knowledge. Charges of complacency and inertia did have some validity in the past – although it is a legitimate defence of higher education institutions that the popularity which encouraged this complacency was an indicator of their meeting student demand. The danger in the 1990s is that prolonged reaction against complacency will result in too much attention being paid to short-term, easily identifiable economic and social returns, and not enough to the longer-term, intangible social and cultural outcomes of teaching and research. Higher education institutions must continue to receive some encouragement to stand aloof from society's changing fashions, as well as to respond constructively to them.

Statistical Annex

Sources:

Except where otherwise stated, figures for higher education were extracted from the country reports (except Portugal). In some cases they have been supplied by authors of the country reports in subsequent correspondence *(this is indicated by an asterisk).* Exchange rates are the daily average of market rates for the year indicated and were supplied by the Economics and Statistics Department of the OECD.

Inter-country comparisons of these figures should be used with extreme caution, taking careful note of the information contained in footnotes.

Table 1. **Percentage of GNP Devoted to Higher Education**

	Institutional aid			Student aid		
	Year	Early 1970s	Mid-1980s	Year	Form of aid	% of GNP
Australia	1975-88	1.36	0.99	1988	grant	0.13
Finland*	1970-88	0.60	0.71	1987	loan/grant	0.19
France*	1975-84	0.68	0.67	1984	loan/grant indirect aid	0.08
Germany*	1970-86	1.02	1.18	1986	loan	0.12
Greece	1974-88	0.54	0.83	1987	indirect/loans	0.10
Japan	1970-85	0.66	0.88	1985	loan	0.03
Netherlands*	1970-84	1.87	1.97	1984	loan/grant	0.20
Norway*	1975-87	1.08	1.04	1987	loan/grant	0.50
Spain	1972-86	0.22	0.51	1987	grant	0.05
United Kingdom*	1984		0.80	1983	grant	0.30
United States*	1970-85	2.10	2.33	1986	loan/grant	0.17

Notes :

Australia : Total Commonwealth government grants to higher education as percentage of GDP.
Finland* : Total expenditure on higher education as percentage of GNP.
France : Total public expenditure on higher education as percentage of GDP (excluding funds for research).
Germany* : Total expenditure on higher education as percentage of GNP.
Greece : Total expenditure on higher education as percentage of GDP.
Japan : Public and private expenditure on higher education as percentage of GNP.
Spain : Total expenditure on higher education as percentage of GNP.
Norway* : Total higher education expenditure as percentage of GNP. The grant/loan figure includes all new loans paid out. If the loan subsidy figure only were included, it would be 0.25 per cent.
Netherlands* : Total expenditure on higher education as percentage of GNP.
United Kingdom* : Public current expenditure on higher education as percentage of GNP; institutions as percentage of GNP.
United States* : Total expenditure on higher education as percentage of GNP (includes purchases of land, buildings and equipment).

Table 2. Annual Rate of Growth of Current Expenditure on Higher Education Institutions

at constant prices

	Period	Annual rate %
Australia*	1975-80	1.9
Commonwealth government grants only	1980-88	1.2
Denmark	1973-80	2.39
	1980-85	−1.20
France*		
Total recurrent public expenditure	1975-80	2.64
	1980-83	5.40
Germany*		
Total recurrent expenditure	1970-80	2.63
	1980-86	1.53
Greece		
All higher education	1974-80	7.18
	1980-88	5.30
Universities	1974-80	5.84
	1980-88	4.39
Japan		
Public institutions	1970-80	13.83
	1980-87	2.64
Private institutions	1971-80	19.84
	1980-85	7.39
Netherlands		
All higher education	1975-80	2.29
	1980-85	−3.63
Spain		
Universities, including capital expenditure	1975-80	10.91
	1980-85	6.18
United Kingdom		
Universities	1970-80	1.30
	1980-86	1.89
Polytechnics (England only)	1982-86	0.51
University general grants + subsidised fees only	1970-80	1.28
	1980-86	−1.46
United States		
Public institutions	1970-80	3.57
	1981-85	2.57
Private institutions	1970-80	2.20
	1981-85	3.92

Table 3. Average Current Institutional Expenditure per Student

		National currency	Exchange rate $	$ (current)	Constant prices
Australia					
All institutions	1975				10 170
	1980				10 161
	1987	8 754	1.43	6 126	8 754
Denmark					
Universities	1973				40 950
	1980				46 660
	1985	37 030	10.59	3 495	37 030
All institutions	1973				52 235
	1980				53 177
	1985	40 068	10.59	3 784	40 068
France*					
All institutions	1975				6 528
	1980				6 617
	1988	17 513	5.96	2 915	6 227
Germany*					
All institutions	1985	11 700	2.94	3 976	
Greece					
All institutions	1974	22 402	30.00	747	58 400
	1980	70 800	42.64	1 660	70 800
	1988	285 849	141.64	2 018	67 000
Universities	1974	22 939	30.00	765	59 800
	1980	79 600	42.64	1 867	79 600
	1988	343 019	141.64	2 422	80 400
Other	1974	18 720	30.00	624	48 800
	1980	46 000	42.64	1 079	46 000
	1988	182 175	141.64	1 286	42 700
Japan					
National institutions	1971	468 000	348.94	1 341	468 000
	1980	1 215 000	226.70	5 360	545 000
	1985	1 424 000	238.62	5 968	558 000
Private institutions	1971	165 000	348.94	473	165 000
	1980	704 000	226.70	3 105	316 000
	1985	1 062 000	238.62	4 451	416 000
Netherlands					
All institutions	1975	15 400	2.53	6 087	21 000
	1980	18 800	1.98	9 457	18 800
	1985	18 000	3.32	5 608	16 800
Universities	1985	23 665	3.32	7 126	
Other institutions	1985	8 262	3.32	2 488	
Norway					
Universities	1975	32 857	5.22	6 291	
	1981	48 922	5.73	8 535	
	1987	67 556	6.74	10 028	
Non-university	1981	26 733	5.73	4 664	
	1987	43 137	6.74	6 403	
Portugal					
Laboratory subjects	1987	371 200	140.79	2 637	
Other subjects	1987	129 500	140.79	920	

Table 3 *(Suite)*

		National currency	Exchange rate $	$ (current)	Constant prices
Spain					
All institutions	1975	33 268	57.40	580	33 268
	1981	99 525	92.26	1 079	38 816
	1985	154 070	170.06	906	39 273
United Kingdom					
Universities	1970-71	1 333	0.41	3 259	5 787
(all recurrent income)	1980-81	5 010	0.50	10 060	5 010
	1986-87	7 926	0.61	12 950	5 581
Universities	1970-71	1 033	0.41	2 526	4 485
(grants + fees)	1980-81	3 998	0.50	8 028	3 998
	1986-87	5 445	0.61	8 897	3 836
Polytechnics	1982-83	3 429	0.66	5 196	3 041
(all recurrent income)	1986-87	3 770	0.61	6 160	2 655
Polytechnics	1982-83	3 330	0.66	5 045	2 608
(grants + fees)	1986-87	3 555	0.61	5 808	2 352
United States					
All institutions	*1969-70	2 452	1.00	3 349	7 526
	1980-81	7 263	1.00	7 263	7 263
	1984-85	10 049	1.00	10 049	8 065
	*1986	11 049	1.00	11 049	
Public institutions	1969-70	2 908	1.00	2 908	6 536
	1980-81	6 365	1.00	6 365	6 365
	1984-85	8 724	1.00	8 724	7 001
Private institutionss	1969-70	4 510	1.00	4 510	10 135
	1980-81	10 003	1.00	10 003	10 003
	1984-85	13 955	1.00	13 955	11 200

Notes

Australia : Commonwealth grants to institutions (1987 prices).
Denmark : Ministry of Education appropriations (1985 prices).
France* : Budget of Ministry responsible for Higher Education (1974 prices) excludes expenditures specifically for research.
Germany* : All institutional expenditure except hospitals attached to universities.
Greece : Ministry of Education budget (1980 prices).
Japan : All institutional expenditure (1971 prices).
Netherlands : All recurrent expenditure (1980 prices). If research is excluded, the university figure for 1985 is about Gld 12 000 or $3 000.
Norway : Net current expenditure in public institutions.
Portugal : Institutional expenditure.
Spain : Institutional budgets (1975 prices).
United Kingdom : Institutional expenditures (1980-81 prices). If research is excluded, the universities' grants-plus-fees figure for 1986-87 falls to about $6 600. Polytechnics figures are for England only.
United States : Current fund expenditures – all sources of income (1980-81 prices).

Table 4. **Sources of Income of Higher Education Institutions**

		General public funds	Fees	Other income
Australia*	1987	87.96	2.11	9.93
Finland				
Public institutions	1987	85.00	n.a.	15.00
France*	1975	93.00	2.90	4.20
All institutions	1984	89.50	4.70	5.80
Germany*				
All higher education	1986	68.50	0.00	31.50
Japan				
Prive 4-year institutions	1971	9.00	75.80	15.10
	1985	15.00	65.80	19.10
Public institutions	1970	83.10	2.00	14.90
	1987	63.10	8.80	28.00
All institutions	1971	53.06	31.69	15.20
	1985	41.99	35.78	22.20
Netherlands*				
All institutions	1985	80.00	12.00	8.00
Norway	1975	95.00	n.a.	5.00
Public institutions	1987	90.00		10.00
Spain				
Universities	mid-1980s	80.00	20.00	n.a.
United Kingdom	1970-71	71.20	6.30	22.40
Universities	1986-87	55.00	13.70	31.30
Polytechnics (England only)	1986-87	72.40	16.20	11.40
United States				
Private institutions	1969-70	20.70	38.60	40.60
	1984-85	18.40	38.70	42.90
Public institutions	1969-70	61.10	15.10	23.70
	1984-85	59.30	14.50	26.30
All institutions	1969-70	46.50	20.50	29.90
	*1986	44.80	22.40	32.80

Notes:

Finlande	:	Figures for fees not available but very small.
France*	:	Expenditure of National Ministry of Education.
Japan	:	73 per cent of other income is revenue of hospitals attached to universities.
Norway	:	Figures for fees not available but very small.
United Kingdom	:	Almost all the fees of undergraduate students are paid out of public funds. This amounts to about half the fee income of universities and probably a greater proportion of the fee income of polytechnics.
United States	:	Figures include all government expenditure at all levels. Loans and grants to students amounted to about 80 per cent of fees in 1969-70 and 95 per cent in 1984-85.

Table 5. Percentage of Income from Industry and Commerce and from Medical Services (other than tuition fees)

		Industry and commerce	Medical services
Denmark			
Technical University of Denmark	1985	2.55	n.a.
Finland			
All institutions	1987	3.90	n.a.
France*			
All institutions	1984	5.80	n.a.
Germany			
All institutions	1986	6.50	25.00
Japan			
National (public) institutions	1985	3.40	18.40
Netherlands*			
All institutions	1987	8.00	n.a.
Norway*			
All institutions	1987	2.00	0.00
United Kingdom*			
Universities	1986-87	2.70	1.85
Polytechnics (England only)	1986-87	0.90	0.00
United States			
All institutions	1984-85	7.60	8.10
Private	1984-85	11.40	9.90
Public	1984-85	5.50	7.10

Notes:

n.a. : Not available but probably very small.
Denmark : Sale of services in one university only.
Finland : Enterprises, foundations and international sources.
France* : Income from enterprises.
Germany : Includes contract research from public funds.
Japan : Corporative research grants and contracts.
Netherlands* : "Third flows of funds".
Norway* : External income except Research Council grants.
United Kingdom* : Universities: research grant income only (about another 1.9 per cent can be accounted for by short-course income, most of which comes from non-government sources.
Polytechnics: non-public sector income.
United States : Private gifts, grants and contracts and sales of educational services.

Table 6. **Student Financial Aid**

		Form of aid*	Maximum per student (national currency)	In $	Average* per student (national currency)	In $	% receiving aid
Australia	1987	Grant		0	825	578	43
Denmark	1986-87	Grant + loan					
Students under 22			39 300	5 266			
Students 22+			43 800	5 869			
Finland	1987	Loan/grant	18 274	4 157	7 832	1 782	Most
France	1988	Grant and			1 190	200	
	1986-87	indirect	12 996	2 009			18
Germany	1986	Loan			1 321	608	
Greece	1987	Indirect/grant			28 215	209	
Japan	1986						
Graduate students		Loan	80 000	475	28 418	169	34
Undergraduates		Loan	45 000	267	5 075	30	10
Netherlands*	1988	Grant	9 700	4 856	8 000		95
		Loan	3 500		1 499	412	45
Norway	1987	Loan			33 500	4 970	Most
		Loan subsidy			8 500	1 261	Most
		Grant			6 250	928	Most
Portugal	1987	Indirect and grant			7 993	57	8
Spain	1986	Grant			16 134	115	
United Kingdom	1984-85	Grant			1 123	1 467	
	1988-89	Grant	2 050	3 648			82

Table 6 *(Cont.)*

		Form of aid[a]	Maximum per student (national currency)	In $	Average[b] per student (national currency)	In $	% receiving aid
United States*	1984-85	Loan and grant			2 142	2 142	30-50
	1986	Grant			742	742	

Notes :

a) Most countries also have some form of indirect financial aid for students. This is usually available to the majority of students. It is included in this column only when it constitutes a significant part of the total financial support. Indirect aid is excluded from the rest of the table.

b) Averaged over all students whether or not they received any aid.

Netherlands* : Excludes fee component of grant. All students receive the basic grant; otherwise eligibility is severely limited by family income. 55 per cent of students receive only the basic grant.

Norway : Loan + grant figure includes interest rate subsidy. Loan figure is amount of value of loans made each year.

United Kingdom : The maximum figure for students living in London is £2 425. Last column refers to full-time undergraduate students. All students receiving grants have fees paid as well.

United States* : Estimates of percentage of students receiving support based on figures given by Bruce Johnstone (1987) in "Sharing the Costs of Higher Education". 1984-85 figures refer to gross loans plus grants available. 1986 figures refer to grants only.

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United Kingdom

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Appendix 16

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